

CANCER

BIOLOGY

**STUDENT
HANDBOOK
2014 - 2015**

Cancer Biology Program

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Welcome to Stanford!

It is a great pleasure that we welcome you to Stanford University Cancer Biology Program! You are here because you are outstanding and want an outstanding graduate education where your mentors, faculty and fellow students are nurturing and supportive. We hope that your graduate training will be stimulating, challenging, exciting, and an overall experience, enjoyable. Remember, you are in charge of your education, so make the most of it! Do not hesitate to question dogmas and challenge well-accepted paradigms, as this is where major strides in our understanding are achieved.

This handbook outlines the philosophy and requirements of the Graduate Degree offered in the interdisciplinary, interdepartmental program of Cancer Biology at the Stanford University. Attainment of the degree of Doctor of Philosophy with a major in Cancer Biology requires outstanding scholarship, a demonstration of the design and execution of original research leading to dissertation that contributes significantly to the general fund of knowledge in the discipline. All degree requirements must be fulfilled.

The Program consists of approximately 60 graduate and 1 postdoc trainees who are funded by a National Cancer Institute training grant, individual fellowships and research assistantships. There are approximately 95 faculty members from basic science and clinical departments.

The Program's home page can be found at: <http://cancerbio.stanford.edu/>

Learn about some of our faculty's research interests, learn what your fellow students are studying. I urge you to continue to learn and exchange ideas with your colleagues at Stanford during your graduate school years. I look forward to getting to know you and wish you much success in your studies.

Sincerely,

Amato J. Giaccia, Ph.D.
Professor and Director
Cancer Biology Program

Background

In 1971, research into the causation and treatment of cancer gained momentum with the adoption of the National Cancer Act by then President Richard M. Nixon. Due to this increased funding as well as advances in molecular biology, our understanding of the molecular nature of cancer has advanced rapidly. New approaches for the detection and treatment of cancer emerged at a rapid rate. As a result, many biomedical graduate students started to have an interest in directing their scientific expertise to cancer etiology, pathogenesis, diagnosis, and treatment. However, at that time, traditional biomedical training programs rarely included significant exposure to cancer biology as a formal discipline.

In response to such a deficiency, the Cancer Biology Program at Stanford University was developed. The Cancer Biology Program was formally approved by the University Senate in February of 1978 and became the first interdisciplinary program in the bioscience studies in the nation. It aimed to select a group of highly qualified graduate students and postdoctoral fellows with a genuine interest in studying cancer, and nurture them into future pioneers in cancer research. It was also decided that the Cancer Biology Program would be a campus-wide interdisciplinary program, so that it can draw the faculty from every biomedical science discipline in the University, hence eliminating departmental boundaries. It allows maximum faculty participation, which in turn, effectively augments possible research opportunities for graduate students and postdoctoral fellows.

Philosophy and Goals

The primary goal of the program is admit and train predoctoral PhD and postdoctoral fellows who have potential to become independent and self-reliant scientists, who take positions as junior faculty in academic research institutions, biotechnology industries or government laboratories. It is expected that trainees of the program will have an opportunity to acquire effective teaching skills. Evaluation of student performance is the responsibility of the individual faculty members.

Cancer Biology Program Administrative Staff

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Executive Committee

Jon Pollack, MD, PhD

Associate Professor
Pathology Department

Steven Artandi, MD, PhD

Professor
Medicine – Med/Hematology

Jeff Axelrod, MD, PhD

Professor
Pathology Department

Katrin Chua, MD, PhD

Associate Professor
Medicine – Med/Endocrinology

Max Diehn, MD, PhD

Associate Professor
Radiation Oncology – Radiation Therapy

Edward Graves, PhD

Associate Professor
Radiation Oncology – Radiation Physics

Ashby Morrison, PhD

Associate Professor
Biology Department

Sylvia Plevritis, PhD

Professor
Radiology – Diagnostic Radiology

Alejandro Sweet-Cordero, MD

Associate Professor
Pediatrics – Cancer Biology

Monte Winslow, PhD

Associate Professor
Genetics

The executive committee meets quarterly and convenes for special sessions as necessary. This committee will be involved in the screening, interviewing, and selection of the predoctoral and postdoctoral fellows. They are responsible for setting policies and guidelines in all aspects of the program.

Student Responsibilities

The Cancer Biology Program stresses to the students, to earn a degree based upon the depth and breadth of their knowledge in the field of Cancer Biology, their ability to generate and defend an original research proposal and to conduct their experiments in an ethical manner. Students should keep their data in a format acceptable to the research advisor. The student is expected to complete the required and elective coursework in a timely manner.

Current Student Reps:

Yr 1: Henrietta Bennett and Michael Dubreuil

Yr 2: Sandra Cristea and Dan Fuentes

Yr 3: Joe Ouadah and Luke Lee

Yr 4: Joanna Kovalski and Natasha Flores

Yr 5: Bethany Schaffer and Ryan Corces-Zimmerman

Yr 6: Si Hui Tan and Liz Pollina

Yr 7: Michelle Zeman and Jeannine Frey

Graduate Student Representation

Every two years depending on the task, the graduate students in the Cancer Biology Program elect students for a term beginning in August and ending July. Student representatives serve as an official liaison between the student and faculty of the program. The representatives are responsible for organizing graduate student participation in program endeavors. Each student should seriously consider his/her choice for the graduate student representative in order to maintain an effective student voice in graduate program issues. The Cancer Biology Program encourages student involvement and feedback to improve the quality of academic and social experiences.

Students hold the following positions

Students Representative for the Scientific Conference Planning Committee

Student Representative for the Admissions Committee

First Year Mentoring

Journal Clubs

SIMR High School Summer Research Program

Happy Hours and Other Social Events

Participating Faculty Research

Visit Cancer Biology Program website for the faculty list and research interest: Listed in Appendices section.

<http://cancerbio.stanford.edu/FacultyResearch/>

Cancer Biology Program Graduate Students

Visit Cancer Biology Program website for the Graduate Students and is listed in Appendices section.

<http://cancerbio.stanford.edu/students/>

GETTING STARTED

SUNet ID – <http://accounts.stanford.edu>

Cancer Biology Program requires all students to establish an @stanford.edu email account prior to arriving on campus. Create your email account when signing up for your official Stanford University account (SUNet ID) that will identify you uniquely and permanently, and will your online credentials, required for all networking.

AXESS – <http://axess.stanford.edu>

This is the web-based system where members of the Stanford community review and update information in their electronic records. Using AXESS, students can add, drop, and evaluate classes; update addresses; review grades; request official transcripts; review degree requirements status; review and accept financial aid awards; and check University bill.

SoM Encryption: Link to help get your machines encrypted. This is required.

<https://med.stanford.edu/datasecurity/>.

Registering for Classes

Students can fill out their study lists through AXESS. The Preliminary Study List is usually due by 5pm on the first day of classes. Revisions to your study list must be made within the relevant deadlines. Deadline to file final study list are due by 5pm on the Friday after the second week of instruction. Late fees are assessed if students are not “at status/registered” by the deadline date. Students receiving fellowships or training grant stipends will not receive their quarterly checks until they are at status/registered. **Please register for 10 units.**

Time Schedule

Please visit the Office of The Registrar website for the Stanford University’s official catalog of courses, degrees, policies, and University and degree requirements, Academic calendar final exam schedules, registration procedure.

Study List

Your Study List is the list of courses you are taking in a given quarter. You are required to submit your student list officially each quarter via AXESS Courses/Grades Function. Remember to enroll in 10 units, if this is applicable to you. There are serious financial consequences to missing these deadlines (a \$200 late fee, losing the health care subsidy, etc.)

Faculty Designations in the Study List

When registering for any type of individual study course (CBIO 299) or TGR (CBIO 801 or 802), choose the correct faculty name and number. To check on the faculty-specific courses in Axess:

- Click on shop for classes. The Basic class Search page will show up.
- Scroll to the bottom of the page and click on Independent Study Search
- Choose Biomedical Informatics from the subject list and type in 299 for the catalog number
- Choose the number that corresponds to the name of the professor who is supervising your research or teaching. If the faculty name does not appear in AXESS, contact the Student Services Officer.

Honor Code

The Honor Code is the University's statement on academic integrity written by students in 1921. It articulates University expectations of students and faculty in establishing and maintaining the highest standards in academic work.

- ❖ The Honor Code is an undertaking of students, individually and collectively:
 - that they will not give or receive aid in examinations; that they will not give or receive unpermitted aid in class work, in the preparation of reports, or in any other work that is to be used by the instructor as the basis of grading;
 - that they will do their share and take an active part in seeing to it that others as well as themselves uphold the spirit and letter of the Honor Code.
- ❖ The Faculty on its part manifests its confidence in the honor of its students by refraining from proctoring examinations and from taking unusual and unreasonable precautions to prevent the forms of dishonesty mentioned above. The faculty will also avoid, as far as practicable, academic procedures that create temptations to violate the Honor Code.
- ❖ While the faculty alone has the right and obligation to set academic requirements, the students and faculty will work together to establish optimal conditions for honorable academic work.

Examples of conduct which have been regarded as being in violation of the Honor Code include:

- Copying from another's examination paper or allowing another to copy from one's own paper
- Unpermitted collaboration
- Plagiarism
- Revising and resubmitting a quiz or exam for regarding, without the instructor's knowledge and consent
- Giving or receiving unpermitted aid on a take-home examination
- Representing as one's own work the work of another
- Giving or receiving aid on an academic assignment under circumstance in which a reasonable person should have know that such aid was not permitted

Please visit this website for further information on avoiding plagiarism:

<http://studentaffairs.stanford.edu/judicialaffairs/policy/honor-code>

Fundamental Standards

At Stanford a single principle, the Fundamental Standard, governs students' behavior:

“Students are expected to show both within and without the University such respect for order, morality, personal honor, and the rights of others as is demanded of good citizens. Failure to observe this will be sufficient cause for removal from the University.”

Over the years, the Fundamental Standard has been applied to a great variety of situations. Actions, which have been found to be in violation of it, include:

- Physical Assault
- Property damage; attempts to damage University property
- Theft, including theft of University property such as street signs, furniture and library books
- Forgery, such as signing an instructor's signature to a grade change card
- Sexual harassment or other sexual misconduct
- Charging computer time or long distance telephone calls to unauthorized accounts
- Misrepresentation in seeking financial aid, University housing, discount computer purchases, or other University benefits
- Misuse of University computer equipment or e-mail

- Sending threatening and obscene messages to another student via e-mail, phone or voice mail.

There is no standard penalty that applies to violations of the Fundamental Standard. Infractions have led to penalties ranging from formal warning and community service to expulsion. In each case, the nature and seriousness of the offense, the motivation underlying the offense and precedent in similar cases are considered.

Please visit this website for more information about the Fundamental Standard:
<http://studentaffairs.stanford.edu/judicialaffairs/policy/fundamental-standard>

Grading Policy

All courses taken to complete the degree requirements must be taken for a letter grade and a “B” or better must be obtained. Cancer Biology graduate students who earn a “C” in a required course must retake the course. If the course is one of the required electives, then the student may either retake the course or choose another course with the equivalent number of units.

Residency Policy

A minimum of 135 units is required for receipt of the Ph.D. from Stanford. Transfer students may receive credit for up to 45 units of appropriate graduate study elsewhere, and at least 90 units must be completed at Stanford toward the Ph.D. Transfer credit will be discussed with the Director.

Graduate Course Requirements

The required courses for Cancer Biology graduate students are:

- Foundations BIOS 200 (6 units; Autumn; 1st year)
- Molecular, Cellular Basis of Cancer CBIO 241 (4 units; Autumn; 1st year)
- Cancer Biology Journal Club CBIO 280 (1 unit; AWS; 1st and 2nd year)
- Advanced Cell Biology BIO 214 (4-5 units, Winter)
- Responsible Conduct in Research MED255 (1 unit; AWS)
- Choose at least one of the mandatory electives:
 - Biological Macromolecules SBIO 241 (3-5 units, Spring)
 - Genomics GENE 211 (3 units, Winter)
 - Cell Signaling CSB 210 (4 units, Winter)
 - Introduction to Biomedical Informatics Research Methodology BIOMEDIN 212, CS 272, GENE 212 (3 units; Spring)
 - Representations and Algorithms for Computational Molecular Biology BIOE 214, CS 274, GENE 214 (3-4 units; Autumn)
 - Translational Bioinformatics CS 275, BIOMEDIN 217 (4 units; Spring)
- Cancer Biology-Related Graduate-Level Electives (total of 6 units)
 - Advanced Immunology IMMUNOL 201 (3 units; Winter)
 - Principles of Cancer Systems Biology CBIO 243 (3 units; Spring)
 - Cancer Epidemiology HRP 230 (not given AY 2012-2013)
 - Computational Molecular Biology BIOC 218 (3 units; AWS)
 - Developmental Biology DBIO 201 (4 units; Autumn)
 - Epigenetics GENE 206/PATH 206 (2 units; alternate years; not offered in AY 2012-2013)
 - Methods and Logic in Experimental Genetics (GENE 222)
 - Computational Analysis of Biology Images Path 218 (2 units; Summer)
 - Stem Cells in Development and Disease PATH 210 (1-2 units; not offered in AY 2012-2013)
 - Stem Cell Biology and Regenerative Medicine DBIO 296 (3-5 units; Winter)
 - The Biology of Small Modulatory RNAs GENE 233 (2 units; not offered in AY 2012-2013)

- Advances in Biotechnology CHEMENG 450 (3 units; Spring)
- The Biology of Chromatin Template Process CSB 250 (3 units; Spring)
- Principles of Biological Techniques MI 215 (3 units; Spring)
- Teaching in Cancer Biology (CBIO 260)*

*Cancer Biology graduate students are encouraged to serve as teaching assistants for Cancer Biology 101 (CBIO 101), a spring quarter course designated for upper-division undergraduates.

Suggested First Year Schedule

Aut:	BIOS 200	Foundations (6 units)
	CBIO 280	Cancer Biology Journal Club (1 unit)
	CBIO 241	Molecular, Cell Biology (4 units)
	MED 255	Responsible Conduct in Research (1 unit)
	CBIO 399	Graduate Research (2 units)
Wtr:	BIO 214	Advanced Cell Biology (5 units)
	CBIO 280	Cancer Biology Journal Club (1unit)
	MED 255	Responsible Conduct in Research (1 unit)
	CBIO 399	Graduate Research (3 units)
Spr:	CBIO 243	Principles of Cancer Systems Biology (3 units)
	CBIO 280	Cancer Biology Journal Club (1 unit)
	CSB 250	The Biology of Chromatin Template Process (3 units)
	CBIO 399	Graduate Research (3 units)

Register for CBIO 399 Graduate Research as needed to maintain enrollment in 10 units each quarter, including summer, until you reach TGR status (135 units) and begin register for CBIO 802 (zero units).

Use Amato Giaccia as your advisor until you find a rotation/research lab. Research is listed under Independent Study, by last name of Advisor, as CBIO 399.

Lab Rotations

Research rotations are critical for students in choosing their research lab or project. Each first year student must participate in at least three research laboratory rotations; most students will have chosen a thesis laboratory by the end of the spring quarter of the first year. If necessary you can do another rotation in the summer quarter of your first year. The first rotation must be done within the Cancer Biology Faculty participating labs. Students may rotate after the first quarter with any faculty member outside the program.

Rotation Advise:

- Set up your rotations as early as possible, but don't be pushed into a rotation you're unsure about just because the quarter is starting
- Learning to do science well is more important than the specific project (you will almost certainly NOT work on your thesis project forever)
- Projects that interest you / Identify interesting labs
- Read papers from the lab first
- Talk to as many principal investigators (PIs) as possible. This allows you to see the culture of the lab without committing to a full rotation
- Personality and style of the PI (e.g. meeting once a day with young Assistant Prof. vs. once a month with Superstar, P.I.)

- Personality and style of lab (e.g. truly independent projects vs. “cog in the machine”)
- Are current and previous graduate students happy in the lab of interest?
- Have current and previous graduate students published as first author?
- Attend lab meeting(s)
- Meet with lab members, especially other grad students, without the PI
- If a rotation is just not working out, come and talk to Amato or Grace about it, rather than wasting the entire quarter
- Don't be afraid to expose yourself to new and different areas of science that appeal to you
- Compare and contrast
- You should rotate in different areas; Geneticists approach problems differently from cell biologists from biochemists, etc.
- HAVE FUN! IT'S YOUR CAREER

Your thesis lab is where you'll be spending a lot of time over the next few years, so do your best to find a place that feels comfortable for you. Besides the scientific questions being answered in the lab, there are many intangible items that enhance your learning experience. Gain information by talking to as many current and former lab members, other students, and PIs as possible to get information about the lab. Rotations broaden a student's research experience and familiarize students with ongoing research projects. Students form friendships with faculty members, as well as students and postdocs in their laboratory, who often become lifelong scientific collaborators.

It is the student's responsibility to contact appropriate faculty members about rotation opportunities.

Lab Rotation Evaluation

Faculty will evaluate the student's performance during rotations. Your lab rotation advisor will submit a completed Lab Rotation Evaluation (Appendices) to the Student Services Administrator at the end of the rotation. Students can also comment on the evaluation form.

Cancer Biology Journal Club

First and second year Cancer Biology students are required to participate in the weekly Cancer Biology Journal Club. In the fall, students hear about faculty labs. In other quarters, students learn to critique articles in a non-threatening environment with the help of Cancer Biology Faculty. Articles are chosen with an aim to complement local seminars.

Cancer Biology Seminar Series

In the monthly seminar series, students and faculty select prominent scientists to speak on topics of interest to the Cancer Biology community. Student hosts introduces the speaker, students attend lunch with the speaker, and host the speaker during the day.

Annual Scientific Conference

All Cancer Biology graduate students and postdoctoral fellows are required to present their research at the annual Cancer Biology Scientific Conference at least three times during their tenure in the program. Predoctoral trainees, three presentations are minimum, one oral and two posters.

“Science Friday” Pizza Talk

This is a 30- minute presentation every other Friday throughout the academic year. The students, faculty members, and postdoctoral fellows get to talk about research, exchange ideas and form collaborations over pizza.

Terminal Graduate Registration (TGR)

Terminal Graduate Registration (TGR) is reached when PhD students have completed the University's residency requirement, been admitted to candidacy, completed 135 units of coursework, and submitted the Doctoral Dissertation Reading Committee form. TGR greatly reduces the tuition rate. When enrolling under the TGR status, a student may only enroll in only 1-3 units of non-required coursework, in addition to the zero-unit TGR course CBIO 802. It is the student's responsibility to be aware of when he/she is eligible for TGR. To be considered on TGR status, the student must submit the TGR form to the Registrar prior to the beginning of the quarter for which the request is being made.

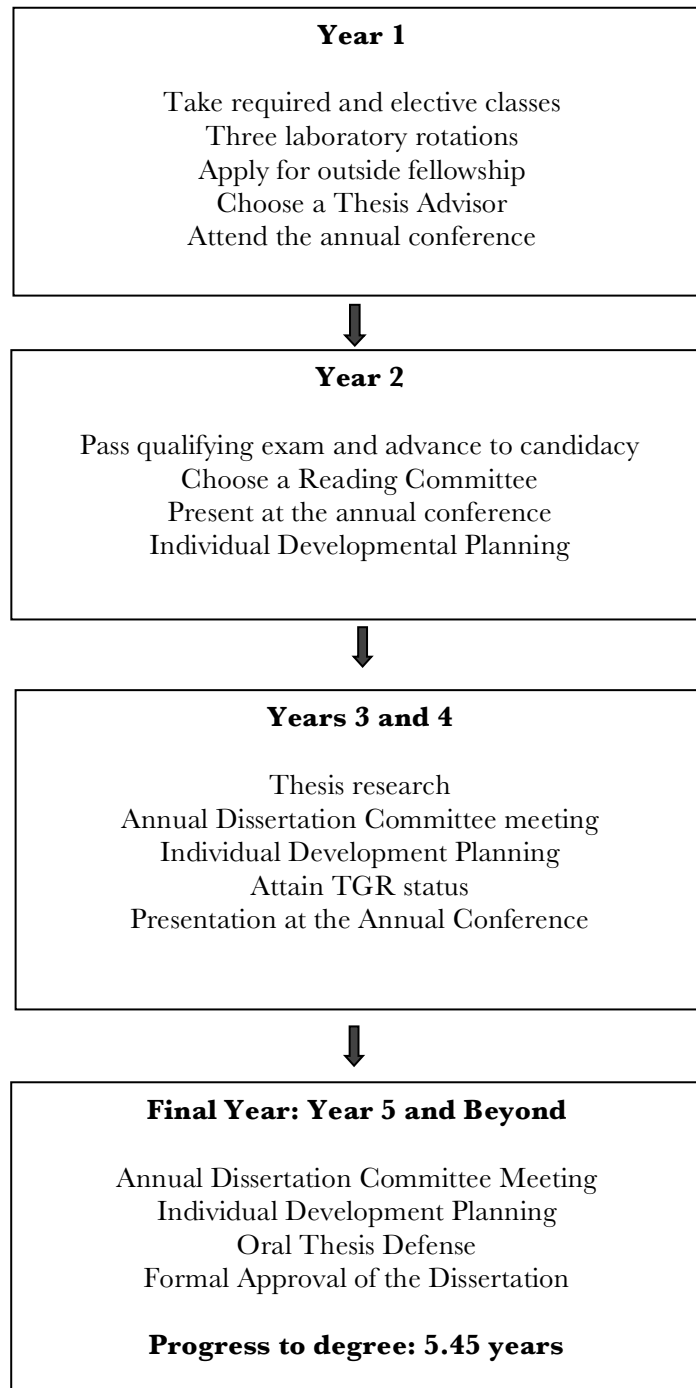
Graduate Tuition Adjustment (AGR)

If a student needs only 3-7 units in the last quarter before qualifying to go TGR, or in the last quarter before graduation, discuss the "Request for Graduate Tuition Adjustment" form (with the Student Services Administrator prior to the first day of the quarter. Sometimes this is referred to as AGR, adjusted graduate rate.

If the AGR petition is granted, students may enroll in 3-7 units. All students are strongly advised, before registering at less than the regular full-tuition rate, to consider the effects of that registration on their degree progress and on their eligibility for financial aid and awards, visas, deferment of student loans, and residency requirements. Form Deadline: The Preliminary Study List deadline of the effective quarter.

Duration of Training and Appointment of Trainees

The PhD Program in Cancer Biology at Stanford is designed for predoctoral trainees to complete their coursework and thesis research projects in five to six years. Graduate students are usually appointed to the training grant for three years. Below is flow chart of a typical graduate student's five-year progress. It highlights the important milestones that should be achieved each year.



Thesis Committee

Thesis Advisor and Advisory Committee

Prior to the selection of a research advisor, the student must become familiar with the research interest of the faculty. This may be initiated early in the rotation as the student meets individually with the participating faculty whose research is of particular or potential interest. A faculty student advisor is available to counsel the student.

After these preliminary interviews and research laboratory experiences, the student decides with whom he/she would like to do his/her dissertation research. The student must communicate their selection of a research advisor to the Student Services Administrator.

After deciding on a Thesis Advisor the student and Thesis Advisor will select a thesis advisory committee by the end of autumn quarter of the second year. The committee is composed of three faculty members from the Cancer Biology Program but does not include the student's thesis advisor. One non-Cancer Biology faculty member may be substituted, if necessary, to provide specific scientific expertise relevant to the student's thesis.

Once the thesis committee members have been decided, you will need to complete the Doctoral Dissertation Reading Committee Form (Appendix II) and obtain all required signatures. The form can also be found on the Registrar's Office website, http://studentaffairs.stanford.edu/sites/default/files/registrar/files/doc_diss_rdg_ctte.pdf. Please submit the completed form to the Student Services Administrator by the end of your autumn quarter of your second year. If you need to change a member in your committee, you need to fill out a Change of Reading Committee Form (Appendix III). The form can also be found on the Registrar's Office website <http://studentaffairs.stanford.edu/sites/default/files/registrar/files/docrdngcomm.pdf>.

Thesis Committee Meetings

After qualifying exam, you and your committee will meet annually, you give a progress report and feedback from them in written form; they will complete the annual committee meeting form (Appendices) and give them to the Student Services Administrator. Your advisor must approve any changes in your committee. Please inform the Student Services Administrator if you are considering a change to your composition.

Beginning in the 4th year of study, the committee will meet twice annually. The first meeting of the fifth year will include a discussion of what additional experimental approaches are expected to be performed by the student prior to writing the thesis. In addition, postgraduate plans will be discussed.

The Student Services Administrator will monitor and maintain the official records of thesis committee meetings. The primary responsibility of arranging meetings lies with the student, and the student maintains the responsibility to communicate information about his/her course schedule and other commitments rapidly to Student Services Administrator to facilitate schedule if they need assistance.

In general:

- Proposal meetings will be scheduled for ninety minutes, and will include time for faculty consultation and post-meeting discussion. At the end of each meeting, the student and faculty committee members will decide together whether feedback will be given as a group or individually. Students are encouraged to take advantage of their committee members for

direct responses following proposal and committee meetings, as well as any other time it maybe useful in these discussions to articulate clear goals for the up coming year.

- Students should treat these meetings much as they would a group meeting but presenting material over the past year.
- Students should hand out a 2-3 pages outline or summary 1-2 days before the meeting.
- Student can request scheduling of an additional committee meeting at any time.
- It is the expectation of the faculty that the PhD project should be carried out and defended in five years or less under normal circumstances. The Program's Graduate Student Advisor must approve any exceptions to the timeline.

Qualifying Examination

Besides coursework, students are required to do a single qualifying exam based on the student's thesis proposal. The goal of the qualifying Examination is to determine the student's preparedness to pursue research on a thesis topic, explore whether potential problems have been considered, assess the student's ability to think, and the student's familiarity with relevant background information and alternative experimental approaches.

The exam will consist of an NIH-style written grant proposal not to exceed ten pages (excluding references) and an oral examination. The proposal is to be handed out to committee members 1-2 weeks prior to the examination. The examination committee will consist of three faculty members and will not include the student's thesis advisor. The exam must be taken prior to the end of spring quarter, second year. If necessary, one retake will be permitted prior to the end of summer quarter, second year.

General goals of the exam are for the student to develop

1. A broad knowledge and understanding of the field
2. A historical perspective, and identification of seminal contributions
3. A knowledge of experimental procedures
4. Critical judgment in the evaluation of data and results
5. New approaches and experiments
6. An ability to draw conclusions from proposed experiments and to propose alternatives

Mechanics of the Qualifying Examination

Each student is responsible for scheduling his/her own examination to conform to the above deadlines. The written proposal shall be given to the qualifying examination committee members at least two weeks prior to the oral exam date. Just prior to beginning of the oral exam, the student's advisor is expected to meet with the examination committee for a brief closed-door session without the student present. A copy of the student's Stanford University transcript and laboratory rotation evaluations will be made available to the examination committee, as well. The student's advisor will not be present during the remainder of the examination.

Once the advisor leaves the room, the qualifying examinations committee shall designate a Chair. She/he will formally be in charge of the proceedings, will decide when the exam is over, and will take a vote of the qualifying examination committee in the student's absence. The student will then be invited into the room to begin his/her presentation. Generally students prepare a 20 minute oral presentation that briefly reviews the background, but largely focuses on the Specific Aims and the proposed experiments. Quite of often this presentation is interrupted by questions from the examination committee. The goal of the examination is not necessarily to finish the prepared presentation, but rather to assess the student's readiness to pursue his/her dissertation work in the laboratory. When the Chair determines that the examination is completed (generally after about

90 to 120 minutes), the student is asked to leave the room and the committee deliberates in private about the student's performance.

A student's performance will be deemed satisfactory or unsatisfactory by a simple majority vote of the qualifying examination committee. The student will be assessed on his/her written proposal, oral presentation, mastery of the specific field of research including background literature and experimental techniques, and general knowledge about the broader field of cancer biology. The decision of the examination committee is conveyed orally to the student immediately following the exam. In addition, the Chair is responsible for summarizing the strengths and weaknesses of the written proposal and oral presentation on the examination form. The original examination form shall be given to the Program Administrator and then kept in the student's file in the Cancer Biology Program Office. The Program Administrator shall give copies of the completed examination form to the student and the student's advisor.

If the qualifying examination committee deems the student's performance unsatisfactory, the committee can request a revision or retake of the written proposal, the oral examination, or both. If the student fails the second examination, he/she will be dismissed from the program.

Here are some questions asked by students about the examination process:

Is the qualifying exam committee the same as the thesis committee?

Not necessarily. The qualifying exam is composed of three faculty members from Cancer Biology, excluding your advisor. Often the thesis committee (Doctoral Dissertation Reading Committee) might include these same individuals plus your advisor. However, you and your advisor are free to reconstitute a different thesis committee after completion of the qualifying exam. Sometimes students want to add individuals from outside the program or even from other institutions to their thesis committee. Often your thesis committee members serve as references for future positions and fellowship applications, so one should give this some careful thought.

How do I choose the topic of my proposal?

This is a major part of the exercise. The most common critiques of grant proposals at all levels are "overly ambitious" and "too narrowly focused". The real trick is to find the middle ground on this spectrum. Specific advice about writing grants can be found at Science Magazine's Nextwave website: In particular, take a look at the article about writing a "research plan."

What is the format of the single exam?

WRITTEN

The goal is to have the student defend the work that he/she proposes for a thesis project. This includes background as well as experimental design and expected results and conclusions. The written part of the exam should be no longer than 10 pages (excluding references) and should be written in the form of an NIH grant proposal. The NIH web page has a standard set of instructions (Form 398) available on the web at: <http://grants.nih.gov/grants/funding/phs398/phs398.html>

Recommended Structure

The general format is for the student to plan a 30 minute presentation for an exam that generally will last from 90-120 minutes. The examiners should be given the written portion of the exam at least two weeks before the oral exam. Students are permitted to practice their oral presentations; often this is done at a lab meeting or with a group of fellow students. However, during the actual examination the student will often not complete his/her planned oral presentation before the

questions begin. The flow of the exam is up to the committee, not the student. Once member of the committee will be designated as Chair. He/she will formally be in charge of the proceedings, will decide when the exam is over, and will take a vote of the qualifying exam committee in the student's absence. The Chair will be responsible for conveying the results of the exam to the student orally and to the Administrator of the Program on a standard written form.

Admission To Candidacy:

After the Qualifying Exam has been passed and most of the course requirements has completed, the student must file an "Application for Candidacy" form. This indicates that the student has formally qualified for Ph.D. candidacy. The application for candidacy form must be filled and submitted to the Program Administrator. The candidacy is valid for five years after filing, unless terminated by the department for unsatisfactory progress.

Dissertation and Oral Exam

The results of the student's independent investigations and contributions to the filed of cancer biology are presented in a Ph.D. dissertation. After substantially completing his/her research, the student may take the University Oral Examination. The examination is preceded by a public seminar given by the candidate. The oral examination is conducted by the University Chair (a faculty member of your choice who is not part of the Cancer Biology Program) and three to four member dissertation reading committee, composed of your thesis advisor and two or three other faculty members.

University Oral Examination

The purpose of the university oral examination is to test the candidate's command of the field of study and to confirm fitness for scholarly pursuits. Every Ph.D. student must pass a university oral examination. At the time of the exam the student's candidacy must be valid and the student must be registered in the quarter in which the exam is taken. The exam will be administered according to the following guidelines base on both University and Program Requirements:

- The examining committee consists of at least five Stanford faculty members; two or three and a Chair. The members of the thesis advisory must be a member of the Stanford Academic Council (professor, associate professor, assistant professor). Emeritus faculty's are also eligible to serve as examiners or as chair of the committee.
- The Chair of the examining committee must be a member of the Stanford Academic Council and cannot come from the same department as either the student candidate or the principal advisor, but may be a member of the Cancer Biology Program. The Chair can be from the same department as members of the examining committee other than the thesis advisor. The student should make certain that their choice of Chair meets the University criteria by double-checking with the Program Administrator or Director.
- The Program Administrator will provide the Chair with a University Oral Examination schedule, University Guidelines for Oral Examinations Procedures, an abstract of the dissertation, and ballots.
- Following the public seminar, the Examining Committee will continue the examination of the candidate (in private) on the same day for a period not to exceed two hours.
- At the end of the examination the Committee members, without the student present, shall vote on the student's performance in a secret ballot. At least 4 votes out of possible 5 are

required for a passing grade. The University Chair signs the university oral examination form after the committee votes on the candidate's defense.

- The oral examination results are validated by the Chair and must be reported to the Program Administrator and the Degree Progress Office within five days of the examination.
- The student's registration and candidacy must be valid for that quarter. A doctoral reading committee list must be on file at the Graduate Program Office.
- The University Chair signs the university oral examination form after the committee votes on the candidate's defense.
- Definition of The Academic Council can be found in this site http://med.stanford.edu/academicaffairs/handbook/chapt2_2.1_2.2new.html

Submitting The Dissertation

The doctoral dissertation advisor, reading committee, and oral exam committee provide guidance and details with regard to dissertation content and format. The Stanford University Registrar at <http://studentaffairs.stanford.edu/registrar/students/dissertation-thesis> publishes general formatting submission directions. All students should read these instructions thoroughly and contact the appropriate Registrar's Office staff or the Student Services Administrator with any questions. Students should read the supplemental materials required for submission closely as it can be confusing.

After successfully completing the revisions recommended during the oral. Each member of the Reading Committee must sign the signature page of the dissertation to certify that the work is acceptable.

The dissertation, signature page signed by the reading committee and signed publication agreement (to be completed by the Research Advisor), must be submitted to the registrar's office. The student must apply for conferral of a graduate degree by filing an Application to Graduate (on AXESS) before the deadline of the term. Once the dissertation, the signed publication agreement, and the Application to Graduate are submitted, the registrar's office will begin the administrative process that results in the conferral of the PhD degree in Cancer Biology, and the student may begin postdoctoral work.

Conferral of Degrees

Deadlines of submission of dissertation are strictly enforced. You must be registered for the quarter in which the degree is conferred or the immediately preceding quarter. Candidacy must be valid when degree is conferred.

Please pay attention to the messages, letters, and notes you receive and respond to them in a timely manner.

Notice of Intention To Graduate

You must file a Notice of Intention to Graduate "Apply to Graduate" through AXESS for the quarter you complete the degree requirements. If you do not finish in time, you will need to annul the initial intention to Graduate and submit a new one for the quarter you intend to finish.

Please refer to the University calendar for deadlines. There are no exceptions for missed deadlines. This is a University rule. The deadlines are listed in AXESS and on the academic schedule.

Graduation Quarter

If you have completed everything except for the report, thesis or dissertation, you may submit that and graduate while registering for a “Graduation Quarter”, your very last quarter.

- The “Graduation Quarter” option is only available for one quarter.
- You must be registered the quarter prior to this (not on leave of absence or doing an internship) and you should file TGR papers and defended your thesis before this.
- You will still need to file to Apply to Graduate for the last quarter in AXESS
- A small tuition fee will be charged and you will be considered a full-time student for various administrative purposes.

Commencement

All Cancer Biology students are encouraged to participate in Medical School Commencement. Sarina Tom is the coordinator in the School of Medicine. If you complete your degree in June or in a previous quarter during that academic year, you will be encouraged to attend the ceremony. Permission maybe granted for you to “walk through” the Commencement ceremony.

How to Finish Up/ How to Graduate

- Arranging for your defense
- Applying to Graduate
- Submitting your dissertation

The Defense

After student’s committee agrees on the time and date of his/her defense, the student or the student services administrator makes the arrangement for the room. Munzer Auditorium, Clark Center Auditorium, LKSC Conference Rooms, and M106. Some students may arrange for smaller rooms and some students may stick with the larger rooms.

To schedule the LKSC and Alway Conference Rooms:

<http://med.stanford.edu/irt/classrooms/features/lksc-seminar-rooms.html>

To schedule Munzer Auditorium:

Jane Kroeten
jkroeten@stanford.edu
723.8423

To schedule Clark Center Auditorium:

http://biox.stanford.edu/room_scheduling.html

Once the date and room have been determined, the defense needs to be announced, the Student Services Administrator will deliver chair packet to the professor who will chair the defense. Remember that the Chair of your defense committee must not be a member of the same department at your PI.

The Student Services Administrator will send an announcement to the Stanford Seminar Calendar; send an email announcement to the Cancer Biology community a week before the defense date, and couple of reminders close to the defense date; arrange for a poster advertising your defense to be

posted around the Medical School campus – if you'd like a poster put up, please email it to gracebaton@stanford.edu two weeks before your defense.

Apply to Graduate

Refer to the academic calendar for each quarter's deadline to apply to graduate in AXESS.

Submission Deadline for Conferral

Please refer to this site for the Conferral Deadline

Financial Aid

The support used for a graduate student's tuition and stipend can be derived from a variety of sources including governmental grants, contracts and fellowships, private, industrial, philanthropic sources, and University funds. Students will be informed of the initial sources of their funding when they arrive at Stanford, and are informed of changes as they occur. All students follow the same program, as outlined below, regardless of the source of support will not impact on the rights of the students in any way.

Student stipends and financial aid are not shown on the initial bill until you are officially registered. Once registered for the quarter, stipends/grants/ aids are activated and reduce the large amount you apparently owe.

You need to register for exactly 10 units per quarter. Some individually awarded fellowships can register for more units.

The University requires a minimum of 135 units to graduate with a PhD.

The department's policy is that all students who successfully complete the necessary requirements as the progress toward their Ph.D. are guaranteed support in the form of tuition, health insurance, and a living stipend. The level of this support is set annually and is generally the same (after tax) for all students regardless of the source of their support, and is equal to the levels paid by similar departments at Stanford. Beyond the third year, by which time students are normally expected to have completed their non-thesis work, departmental support is not guaranteed. The thesis advisor takes responsibility for providing support through completion of the Ph.D. degree, assuming satisfactory progress.

Tuition

Student's tuition is usually covered by either fellowships or research assistantship and students will receive tuition credit on their University bills.

Research Assistantships

Students on research assistantships are paid bi-monthly, on the 7th and 22nd of each month (or the preceding workday if these dates fall on a holiday or weekend). Checks are sent directly to the department. Checks may be deposited directly to the bank of your choice by filing an automatic direct deposit from online, through AXESS.

- The I-9 form must be completed before assistantship checks can begin. See the Student Services Administrator for this paperwork.
- Please note that housing and other fees are not automatically deducted from your salary
- Your salary is taxable and taxes will be withheld as you request on the W-4 Tax Data form, submitted through AXESS.

Fellowship stipend

Fellowship stipend checks are paid quarterly, issued no sooner than the day before classes begin. Receive stipend payments at the beginning of each quarter for the entire quarter. If you are living in campus housing, the system is set up to automatically subtract the housing fees from the stipend amount. Stipend checks are not issued if the student is registered fewer than 8 units of credit in a given quarter.

Health Insurance and Dental

Students who have insurance coverage from another source should fill out the Insurance Waiver in AXESS prior to the deadline.

Students are automatically enrolled in Cardinal Care during registered quarters unless health insurance is waived through AXESS. If you intend to waive the Cardinal Care, do so before the deadline or you will be charged for health insurance! Cancer Biology will not pay for the fee if you have your own coverage and miss the deadline.

The Cancer Biology Program will provide up to a \$100 stipend per academic year to help offset the cost of enrolling in a dental insurance plan and/or discount dental program. The Vaden Health Center Insurance and Referral Office, distributes information about voluntary individual preferred provider dental plans. To request a dental resource packet with information about these dental options (including premiums and how to enroll), stop by the Vaden Insurance and Referral Office or submit your name and address in a [HelpSU ticket](#).

Vaden Health Center Insurance and Referral Office maintain a [list of local dentists](#) who have agreed to treat Stanford students at a discount. The list of discount dentists is included in the dental resource packet.

If you are currently enrolled in another dental insurance plan or discount program, you are able to request the stipend to be applied to your yearly premium. You may also request the stipend for any dental visit co-pay up to \$100 per academic year. You may choose whatever plan you prefer. No special form is required. Provide the Student Services Administrator with proof of the amount you paid (paid invoice, credit card statement, canceled check) and proof of insurance coverage (copy of member card or electronic communication with your name and insurance information).

All students are required to pay the Vaden Student Health Services Fee, which is separate from health insurance. This is true for all on-campus students, even if health insurance coverage is waived, with one exception of students who are NSF fellows. The University will pay the Vaden fee for NSF fellows.

For Vaden Health Insurance Assistance, contact 650.723.2135 or visit the web site <http://vaden.stanford.edu/insurance/index.html>

Direct Deposit

Fellowships stipends and assistantship payments are best handled through direct deposit to your back account. To set up your direct deposit, login to AXESS - Employee Information tab - Financial Information - Director Deposit and follow the instructions.

Stanford ePay

Stanford ePay is the University's online billing and payment services which provides the ability to view and pay the University bill online 24/7, seven days a week. Click "Stanford ePay Log In" in the Home tab in AXESS.

With Stanford's ePay, students can:

- Pay for their University bill online
- Authorize parents or others to pay their University bill online
- View activity since the last bill and the current account balance
- View billing history

askJane

The Student Services Center is encouraging students to significantly increase their use of self-service portals <http://studentaffairs.stanford.edu/askjane>

Application for Outside Funding

Students are strongly encouraged to submit applications for outside sources of funding for graduate fellowship support during the fall quarter of their first year. The process of writing for funding is a useful learning experience and any additional funding for the program allows funding spots for other students. Because of the quality of students we recruit, our students have been very successful in securing grants in the past. Funding agencies that fund graduate student fellowships include NSF, NIH, Ford Foundation and others (see Cancer Biology web site for a more complete list). The deadline for most of these grants is the first week of November. Helpful hints for the successful applicants include:

- Cancer Biology Workshops, this year, it's lead by Dena Leeman, Blair Benham-Pyle, and Joe Ouadah
- Prepare rough drafts early
- Look at a copy of your rotation advisor's grant or other successful students' applications
- Have someone (a faculty member – or two) read over it and offer advice

Taxes

The Student Services Administrator is not permitted to give tax advice.

Here are some important, generally available information (not tax advice):

- Basically, unless you are self-paying tuition and planning to claim Hope or Lifelong Learning Credits, you are probably better off just throwing away your 1098-T form!
- Use the quarterly summaries in AXESS to report your scholarship/fellowship/grant/stipend income
- Note which stipends (covering mandatory fees, like health insurance, as outlined on the Stanford website) you do not need to count as income
- Use your W-2 form to report your salary/assistantship income
- Please see the "Identifying Funding Awarded and Qualified Charges on your Student Account" on this website <http://studentaffairs.stanford.edu/sfs/tax/resources-funding> According to this site you do NOT have to pay income taxes on Vaden Health Services Fee, Health Insurance, or Required Fees (such as 1st year student Document Fee or ASSU Fee).
- Stanford issues an annual tuition statement, IRS Form 1098-T, to provide information necessary for students or parents to claim educational tax credits (<http://www.irs.gov/uac/Tax-Benefits-for-Education:-Information-Center>). It has come to

our attention that some online accounting programs (i.e., Turbo Tax) inappropriately refer to Form 1098-T as an income form. Using the 1098-T form to determine income rather than claim educational tax credits can cause misunderstanding and errors. Do not use the 1098-T form to determine fellowship/scholarship income. Visit Stanford's website with some guidelines for dealing with taxes for stipends.

- The Office of the Vice Provost for Graduate Education (VPGE) and Student Financial Services <http://vpge.stanford.edu/>
- The Bechtel International Center (for international students) <http://icenter.stanford.edu/>
- The Controller's Office <http://www.stanford.edu/group/fms/fingate/contact/index.html>
- IRS website <http://www.irs.gov/>

Resources and Facilities

Laboratory:

The Cancer Biology Program trainees carry out research activities in the individual laboratories of 72 faculty in the School of Medicine, and Humanities and Sciences. Medical School faculty affiliated with the program are located in the Department of Biology, *Cardiovascular* Medicine, Chemical and System Biology, Dermatology, Developmental Biology, Endocrinology, Gerontology & Metabolism, Genetics, Gastroenterology and Hepatology, Hematology, Microbiology and Immunology, Neurology and Neurological Sciences, Neurosurgery, Obstetrics and Gynecology, Oncology, Otolaryngology, Pathology, Pediatrics, Pulmonary and Critical Care, Radiation Oncology, Radiology, Structural Biology, and Urology. The total laboratory space available to program graduate students runs to approximately 100,000 square feet. The laboratory facilities are superb, encompassing state-of-the-art equipment in the many diverse subfields of cancer biology program.

The Lorry I. Lokey Stem Cell Research Building (SIM1) house the Stanford Stem Cell Biology and Regenerative Medicine Institute, integrating researches from multiple specialties and disciplines including cancer, neuroscience, cardiovascular medicine, transplantation, immunology, bioengineering, and developmental biology. The Institute is focused on making discoveries in stem cell research and translating them into preclinical applications, innovative therapies, and treatments. The Stanford Cancer Institute will have a major presence in the building, including researchers studying human cancer stem cells through the Ludwig Center for Cancer Stem Cell Research and Medicine. SIM1 has been designed with great attention to the needs of the researchers and the institutional goals of promoting information sharing collaboration. These social innovations manifest themselves in the collaborative translational benches.

The Beckman Center is currently home to biosciences faculty members in many departments such as biochemistry, biological sciences, chemistry department, developmental biology, medical information sciences, microbiology and immunology, molecular and cellular physiology and other medical school departments. Many faculty members are investigators with Howard Hughes Medical Institute (HHMI) Unit, of whom two are Nobel laureates and eight National Academy of Science members. The Beckman Center houses several core facilities to support scientific research.

The Center for the Clinical Sciences Research (CCSR) houses basic scientists and clinical researchers to encourage intellectual exchange and collaboration among scientists. This kind of approach to medicine allows scientists to share insights and expertise with each other and with clinicians, which can then lead to new investigation and applications. Research specialties include molecular pharmacology, immunology, genetics, oncology, anatomy, dermatology and bone marrow transplantation, pathology, radiation oncology and surgery. The mix and match atmosphere is intended to shake things up, helping the basic scientists to more easily realize the potential clinical applications of their research and enabling the clinical researchers of the group to get a preview of what new findings may soon be coming their way. Shared facilities within CCSR include: a three color FACscan, ultra and high speed centrifuges, ELISA plate readers, AUTO-MACS cell separation system, 2 BioRad robotic microarrays, a BioRad phosphimager and Gel Documentation system,

Packard auto-gamma spectrometer, fluorimeter, immunofluorescent microscopes with associated image capture and analysis capability and several 5700 Perkin Elmer real-Time PCR cyclers.

The Medical School Lab Surge (MSLS) contiguous with the Lucas Center, provides laboratory and office space for investigators from the departments of radiology, psychiatry, neurology, neuroradiology and surgery. This is one of the few centers in the world with major centralized resources devoted to research in magnetic resonance imaging (MRI) spectroscopy (MRS) and X-Ray/CT imaging. The Center has pioneered MRI/MRS/X-Ray/CT technology while developing new techniques that benefit patients with stroke, cancer, heart disease, and brain disorders. It provides office and laboratory facilities for faculty members and their complement of research staff, postdoctoral fellows, graduate students, and support staff. The Center supports collaborative partnerships and original research using human subjects and intact animal models.

Each laboratory associated with the Program contains state-of-the-art equipment for its research specialty. Among the major centralized facilities available to all trainees in the Program are:

1. The Protein and Nucleic Acid Facility located in the Beckman CMGM. Multifaceted biotechnology support for basic science research: DNA sequencing and oligo synthesis, protein sequencing and peptide synthesis; protein digestion and HPLC analysis and mapping; mass spectrometry; capillary electrophoresis; and microarray for gene expression analysis.
2. The Animal Tumor Models Shared Resource located in CCSR. Provides services in three major areas, including transgenic and knockout mice, preclinical oncology and animal histopathology services. The transgenic and knockout mouse production services were established in 1996 at the School of Medicine with the overall objective of providing genetically modified mouse models and supporting technologies to Stanford investigators of cost-effective rates. The Veterinary Service Center (VSC) in the Department of Comparative Medicine runs the animal histopathology service component of the Shared Resource. Major services include tumor analysis by histology, immunohistochemistry and pathological interpretation. The preclinical oncology services are new additions to the Animal Tumor Models Shared Resource. These services were funded and established by the Stanford Cancer Center to support the development and testing of new compounds and to better meet the growing needs of the Cancer Center members for preclinical animal models and therapeutics.
3. The Tissue Procurement Facility Shared Resource located in Edwards Research building. The overall objective of the Tissue Procurement Facility (TPF) is to collect and provide needed tissue specimens to Stanford Cancer Center investigators to support their cancer-related research. TPF activities and services include collecting and banking freshly frozen tumor and normal tissues from excess surgical material and from autopsy, providing fresh tumor tissue for viable cell studies, processing and banking serum specimens from cancer patients, maintaining a tissue database with links to clinicopathological data, providing histological staining and pathological review, coordinating patient consent and ensuring regulatory compliance.
4. The Proteomics Shared Resource located in Keck Science Building. The Stanford Proteomic Shared Resource provides state-of-the-art, user-friendly facilities and service in addition to education, methods development and new applications development designed to meet the rapidly evolving needs of Cancer Institute investigators. Services include peptide and protein identification, characterization of post-translational modifications, protein quantitation, biomarker verification and metabolic studies. These analyses extend from the identification of protein complexes purified from in vitro systems, to the characterization of proteins in mouse tissues in transgenic models, to the quantitation of chemopreventive agents and metabolites in human serum. The shared resource has been servicing the research community since the year 2000; services are used by over 80 research labs across campus annually, as well as institutions worldwide. Facility scientists have recognized expertise in proteomics and mass

spectrometry, and are committed to helping develop and implement proteomic tools for future diagnostics and clinical tests.

5. The Cell Science Imaging Facility (CSIF) located in Beckman Center. The Cell Sciences Imaging Facility (CSIF) provides access to and training in high-resolution, state-of-the-art fluorescence and electron microscopy services. The facility has three advanced imaging systems that provide confocal, deconvolution and 2-photon fluorescent light microscopy technologies. For electron microscopy, the facility has a full-service laboratory that offers sample preparation and training for both transmission and scanning electron microscopy technologies. Specific goals include acquisition of cutting-edge light and electron imaging instrumentation, training in the proper application and use of available equipment and technical assistance and consultation in the application of advanced immuno- and histo-chemical techniques. The CSIF is also dedicated to providing access to multi-dimensional (3D, 4D) imaging technology for volumetric analysis of cell and tissue architecture and continues to obtain and make available advanced 3D, 4D volume rendering, image-analysis software.
6. The Flow Cytometry Shared Resource located in Beckman Center. The Flow Cytometry Shared Resource provides cell analysis and cell sorting services for cancer research in the Stanford community. The mission of the Flow Cytometry Shared Resource is to (1) promote cancer research and training for cell-based assays at the highest level of quality and rigor; (2) bring new developments in instrumentation, technique and analysis for preclinical use in the Stanford research community; and (3) support early clinical trial analysis in patient management. The Flow Cytometry Shared Resource enhances the productivity and effectiveness of research by promoting high-content data acquisition, ensuring the highest data quality and consistency, carrying out efficient cell sorting, providing reliable data management, educating and training researchers and consulting in experiment design and evaluation. Major applications of flow cytometry services include DNA content analysis for tumor biology, immunological characterization of lymphoma cells, stem and immune cell sorting, isolation of key cell population in tumors and definition cell signaling cascades for tumor classification.
7. The DNA Microarray Core Facility (DMCF) located in CCSR. The goal of the DNA Microarray Core Facility (DMCF) is to facilitate the application of cutting-edge microarray technology and analysis techniques by Cancer Center members. Services provided include producing catalog and custom-spotted microarrays, supporting use of multiple formats of Stanford University and commercial microarrays, assisting with experimental design, archiving of array data and providing bioinformatics tools for the annotation, analysis, visualization and publication of microarray data. The DMCF combines the resources of the Stanford Functional Genomics Facility, which develops new technology for genomics, and the Stanford Microarray Database (SMD), which is the largest and mostly widely used public database supporting microarray research. The main objective of the DMCF is to provide Cancer Center members with a complete set of reagents and tools to allow them to carry out high-throughput and high-impact cancer research using microarrays, from assistance with experimental design to publication of the generated data.
8. The Stanford Center for Innovation in In-Vivo Imaging (SCI3) located in Clark Center. The mission of the Stanford Center for Innovation in In-Vivo Imaging (SCI³) is the application and advancement of technologies for in-vivo biological assessment and imaging in animal models. The instrumentation will support the development of reagents and approaches that will reveal in-vivo changes at the molecular and cellular level such that a greater understanding can be gained in animal models. In this manner the power of repeated measures can be applied to these models enriching the data sets and improving the statistics. This core will provide a test bed for evaluating human imaging reagents and strategies. The flexibility and rapid analyses of the animal models will greatly accelerate the development of these molecular imaging strategies as well as novel therapeutic strategies for a variety of diseases. The Clark Building houses the

SCI³ core resources and instrumentation. The Small Animal Imaging Core Facility is partially supported by funds from the [Stanford Digestive Disease Core](#), the [Stanford Comprehensive Cancer Center](#) and the [Stanford ICMIC](#), and is operated by the [Departments of Pediatrics \(Neonatology\)](#) and [Radiology](#).

Health and Safety

Stanford is committed to providing a safe and healthy environment for faculty, staff, and students. The Health Safety Program Office runs these programs: Chemical Safety, BioSafety, Health Physics and Radiation Safety, and Laser Safety. The P.I. (or a designated member of the lab) is responsible for providing information and training about lab equipment, procedures and chemicals. Additionally, all new students must sign up for a lab safety training seminar offered at the beginning of each quarter; information will be provided at the Biosciences Orientation. <http://med.stanford.edu/somsafety/training.html>. Depending upon the type of work undertaken in your rotation and thesis labs, you may have to take additional training for blood-borne pathogens, radioactivity, human and/or animal subjects.

Family Leave

Maternity leave is granted to full-time female graduate students. For more information see the Graduate Academic Policies and Procedures section on childbirth accommodations. <http://gap.stanford.edu/5-9.html>

Helpful Links:

Academic Calendar

<http://studentaffairs.stanford.edu/registrar/academic-calendar>

Cardinal Care

<http://www.stanford.edu/group/vaden/insurance/cardinalcare.html>

A Guide for New Graduate Students

<http://studentaffairs.stanford.edu/gradadmissions/admitted>

Graduate Academic Policies and Procedures handbook

<http://gap.stanford.edu/>

Housing Assignments

<http://www.stanford.edu/dept/rde/cgi-bin/drupal/housing/>

Office of the Registrar

<http://studentaffairs.stanford.edu/registrar>

Student Financial Activities

<http://www.stanford.edu/group/fms/fingate/students/>

Bechtel International Center

<http://icenter.stanford.edu/>

Vice Provost For Graduate Education (VPGE)

<http://vpge.stanford.edu/>

Graduate Life Office (GLO)

<http://studentaffairs.stanford.edu/glo>

LGBT Medical Education Research Group
<http://med.stanford.edu/lgbt/>

Fellowships

NSF: <http://www.nsf.gov/>

NDSEG: <http://ndseg.asee.org/>

NRSA: <http://grants.nih.gov/training/nrsa.htm>

VPGE: <http://vpge.stanford.edu/funding/vpgefellowships.html>

The Medical Scientist Training Program (MSTP)

MSTP provides funding and structure for select group of incoming medical students with an opportunity to pursue a training program designed to equip them for careers in academic investigative medicine. The flexible curriculum at Stanford Medical School allows each student to pursue (in consultation with her/his preceptor and other advisors) a plan of study that will satisfy the requirements for the MD degree and allow performance of doctoral level research leading to the PhD degree sometimes work in Cancer Biology Program.

Masters of Science in Medicine Degree Program

The “Master of Medicine” (MOM) program is a new master’s degree program that will provide PhD candidates serious exposure to clinical medicine with a view to fostering translational research. The incredible pace of basic science discovery today stands in dramatic contrast to the slow rate of development of useful medical advances. There is urgent need for a more efficient mechanism to generate a larger pool of scientists knowledgeable about human biology and disease. The goal of the MOM program is to train a new generation of PhD students about human biology and disease, and thus better prepared to translate new scientific discoveries into useful medical advances. The MOM program will admit an elite group of highly talented people who have a serious commitment to translational research but are not interested in becoming clinicians. Students admitted to any of the PhD programs offered at Stanford University will have the opportunity to apply for admission to this program on a competitive basis. For more information please visit <http://med.stanford.edu/msm/>

Appendices – Program Forms

Participating Faculty and Micro Research Description
Cancer Biology Graduate Students
Lab Rotation Evaluation Form
Qualifying Exam Forms
Doctoral Dissertation Reading Committee
Annual Dissertation Committee Meeting
Request for TGR Status
University Oral Examination
Petition for Graduation Quarter Form
Sample Dissertation Thesis Proposal Signature Page
Academic Calendar 2014 - 2015

APPENDICES

CANCER BIOLOGY FACULTY ROSTER

ACTIVE FACULTY MEMBERS

Name	Title	Department	Role in Program	Research Interest
Arash Alizadeh, MD, PhD	Assistant Professor	Medicine/Oncology	Mentor	Systems immunology & Oncogenomics of B-cell lymphomas
Steven Artandi, MD	Professor	Medicine/Hematology	Mentor, Executive Committee	Telomerase in cancer, aging and human stem cell disease
Laura Attardi, PhD	Professor	Radiation Oncology	Mentor, Seminar Series Committee	p53 pathways in development, cancer and disease
Jeffrey Axelrod, MD, PhD	Professor	Pathology	Mentor, Executive Committee	Molecular and cell biological mechanisms of planar cell polarity signaling
Michael Bassik, PhD	Assistant Professor	Genetics	Mentor	Developing novel genetic screening tools to explore stress and pathogen biology
Philip Beachy, PhD	Professor	Developmental Biology; Institute of Stem Cell Biology and Regenerative Medicine	Mentor	Biology and mechanism of Hedgehog signaling; tissue regeneration and neoplasia
Anne Brunet, PhD	Associate Professor	Genetics	Mentor	Genetic and epigenetic regulation of aging
Howard Chang, MD, PhD	Professor	Dermatology	Mentor	Genome regulations by long noncoding RNAs
Katrin Chua, MD, PhD	Associate Professor	Medicine/Endocrinology, Gerontology & Metabolims	Mentor, Executive Committee	Chromatin regulation and nuclear signaling in cancer and aging
Karlene Cimprich, PhD	Professor	Chemical & Systems Biology	Mentor	Maintenance of genome stability and cancer biology
Jennifer Cochran, PhD	Associate Professor	Bioengineering	Mentor	Protein engineering to develop research tools and clinical therapeutics
Gerald Crabtree, MD	Professor	Pathology	Mentor	Mechanisms and regulation in development and disease
Maximilian Diehn, MD, PhD	Assistant Professor	Radiation Oncology	Mentor, Executive Committee	Cancer stem cell biology, cancer genomics, biomarkers
Brian Feldman, MD	Assistant Professor	Pediatrics	Mentor	Hormonal regulation of stem cells and implications for cancer and metabolism
Margaret Fuller, PhD	Professor	Developmental Biology	Mentor	Regulation of self-renewal and differentiation in adult stem

Palmer, PhD	Professor			inflammation
Donna Peehl, PhD	Professor (Research)	Urology	Mentor	Development of preclinical models of prostate and renal cancer
Marlene Rabinovitch, MD	Professor	Pediatric Cardiology	Mentor	Signaling and gene regulation control angiogenesis and aberrant cell growth
Jianghong Rao, PhD	Associate Professor	Radiology	Mentor	Prove chemistry and nanotechnology for molecular imaging and diagnosis
Rajat Rohatgi, MD, PhD	Assistant Professor	Medicine/Oncology	Mentor	Temporal and spatial regulation of signal transduction at primary cilia
Glenn Rosen, MD	Associate Professor	Medicine/Pulmonary	Mentor	Molecular mechanisms of abnormal injury and repair and cell death
Matthew Scott, PhD	Professor	Developmental Biology	Mentor	Genetic regulation of development & disease; Hedgehog signaling & cancer
Kim Seung, MD, PhD	Professor	Developmental Biology	Mentor	Pancreas developmental biology and disease mechanisms
Kathleen Sakamoto, MD, PhD	Professor	Pediatrics	Mentor, Course Leader	Normal and aberrant hematopoiesis, including leukemia and bone marrow failure
Julia Salzman, PhD	Assistant Professor	Biochemistry	Mentor	Cell-Type Specific Features of Circular RNA Expression
Lucille Shapiro, PhD	Professor	Developmental Biology	Mentor	Systems architecture regulating asymmetric cell division
Arend Sidow, PhD	Associate Professor	Pathology and Genetics	Mentor	Genomics of gene regulation and cancer
Branimir Sikic, MD	Professor	Medicine/Oncology	Mentor	Cancer drug resistance, predictive therapeutic biomarkers, new therapies
Zijie Sun, PhD	Associate Professor	Urology	Mentor	Cell signaling and steroid hormone action in development and tumorigenesis
Jon Sunwoo, MD	Assistant Professor	Otolaryngology	Mentor	Natural killer cells, cancer stem cells
Virginia Walbot, PhD	Professor	Biology	Mentor	Mechanisms of cell fate specification
William Weis, PhD	Professor	Biophysics	Mentor	Molecular mechanisms of cellular adhesion, cell polarity, and Wnt signaling
Albert Wong, MD	Professor	Neurosurgery	Mentor	Receptor signaling, cancer stem cell markers and anti-cancer vaccines

				disease
Dean Felsher, MD, PhD	Professor	Medicine/Oncology	Mentor	Mechanisms of tumorigenesis
James Ferrell, MD, PhD	Professor	Chemical and Systems Biology	Mentor	Cell cycle regulation and systems biology
Andrew Fire, PhD	Professor	Pathology	Mentor	RNA-based regulation, somatic diversity
James Ford, MD	Associate Professor	Medicine/Oncology	Mentor	Mammalian DNA repair and cancer genomics
Judith Frydman, PhD	Professor	Biology	Mentor	Protein folding, protein quality control, amyloid and misfolding diseases
Isabella Graef, MD, PhD	Assistant Professor	Pathology	Mentor	Molecular & Cellular basis of neurodevelopmental and neurodegenerative disorder
Andrew Hoffman, MD	Professor	Medicine/Endocrinology	Mentor	Epigenetics and long-range chromatin interactions in health and disease
Susan Knox, MD, PhD	Associate Professor	Radiation Oncology	Mentor	Targeted therapies for use with radiation experimental therapeutics
Quynh-Thu Le, MD	Professor	Radiation Oncology	Mentor	Detecting and targeting hypoxia in head and neck/lung cancers
Ronald Levy, MD	Professor	Medicine/Oncology	Mentor	The immune systems and cancer
Shoshana Levy, PhD	Professor	Medicine/Oncology	Mentor	Role of the tetraspanin CD81 in the immune system and disease pathogenesis
Jan Liphardt, PhD	Associate Professor	Bioengineering	Mentor	Biological spatial organization on the mesoscale (10nm-10microns) and the role of mechanical cues in cellular decision-making
Anson Lowe, MD	Associate Professor	Medicine/Gastroenterology and Hepatology	Mentor	Molecular mechanisms of human adenocarcinomas
Bingwei Lu, PhD	Associate Professor	Pathology	Mentor	Neural stem cell biology and neurodegeneration
Peter Marinkovich, MD	Associate Professor	Dermatology	Mentor	Role of extracellular matrix in carcinoma invasion
Tobias Meyer, PhD	Professor	Chemical Systems Biology	Mentor	Systems biology of cell signaling and decision process
Daria Mochly-Rosen, PhD	Professor	Chemical Systems Biology	Mentor	Protein-protein interactions in cell signaling; PKCs/ALDHs; rational drug design
Robert Negrin, MD	Professor	Medicine/Blood and Bone Marrow Transplantation	Mentor	Hematopoietic cell transplantation, immune regulation and cellular immunotherapy
Theo	Associate	Neurosurgery	Mentor	Neural stem cells and

ASSOCIATE FACULTY MEMBERS

Name	Title	Department	Role in Program	Research Interest
Nidhi Bhutani, PhD	Assistant Professor	Orthopaedic Surgery	Mentor, Course Leader	DNA demethylation, Mechanisms of reprogramming, Musculoskeletal regeneration
Helen Blau, PhD	Professor	Microbiology and Immunology	Mentor	Regenerative medicine & stem cells, nuclear reprogramming, cell fate plasticity
Matthew Bogyo, PhD	Professor	Pathology	Mentor	Small molecules to study proteases in cancer, inflammation and parasitology
Linda Boxer, MD, PhD	Professor, Vice Dean of The School of Medicine	Medicine/ Hematology	Mentor	Mechanisms of activation of oncogenes in B cell malignancies
Martin Brown, PhD	Professor	Radiation Oncology/Division of Radiation and Cancer Biology	Mentor	Mechanisms of how angiogenesis and vasculogenesis affect tumor therapy response
Michele Calos, PhD	Professor	Genetics	Mentor	Genome engineering, stem cell therapy, iPS cells, muscular dystrophy, integrases
Christine Cartwright, MD	Professor	Medicine Gastroenterology & Hepatology	Mentor	Molecular mechanisms of oncogene activation in colon cancer
James Chen, PhD	Associate Professor	Chemical and Systems Biology (Chemistry)	Mentor	Chemical and developmental biology
Yoon-Jae Cho, MD	Assistant Professor	Neurology	Mentor	Functional genomic approaches to understanding childhood brain tumors
Gilbert Chu, MD, PhD	Professor	Medicine/Oncology	Mentor	Molecular basis for DNA repair by on-homologous end joining
Michael Clarke, MD	Professor	Internal Medicine	Mentor	Molecular regulation of self renewal in normal stem cells and cancer
Michael Cleary, MD	Professor	Pathology	Mentor	Genetic and epigenetic mechanisms of cancer pathogenesis
Stanley Cohen, MD	Professor	Genetics	Mentor	Transcriptional and post-transcriptional regulation of gene expression
Christopher Contag, PhD	Professor	Pediatrics	Mentor	Refining immunotherapy through imaging and combination biotherapies
Martha Cyert, PhD	Professor	Biology	Mentor	Mechanisms of Ca ²⁺ -dependent signal transduction
Edgar Engleman, MD	Professor	Pathology	Mentor	Immune mechanisms in pathogenesis and treatment of cancer and autoimmune

PhD				carcinogenesis
Mark Pegram, MD	Professor	Medicine/Oncology	Mentor	Phase 2 Study of the Monoclonal Antibody MGAH22 (Margetuximab) in Patients With Relapsed or Refractory Advanced Breast Cancer
Sylvia Plevritis, PhD	Professor	Radiology	Mentor, Executive Committee	Cancer systems biology, outcomes research, tumor plasticity and microenvironment
Jonathan Pollack, MD, PhD	Associate Professor	Pathology	Mentor, Executive Committee, Admissions Chair	Cancer genomics, novel cancer genes and biomarkers
Matthew Porteus, MD	Associate Professor	Pediatrics	Mentor	Genome Editing and Population Dynamics for Gene Therapy and Cancer Research
Thomas Rando, MD, PhD	Professor	Neurology & Neurological Sciences	Mentor	Molecular mechanisms of stem cell fate determination
Julien Sage, PhD	Associate Professor	Pediatrics	Mentor	Cellular and molecular mechanisms of tumorigenesis and regeneration
Tim Stearns, PhD	Professor	Biology	Mentor	Cell organization and signaling and deciphering human genetic variation
Alejandro Sweet-Cordero, MD	Associate Professor	Pediatrics	Mentor, Executive Committee	Functional genomics of cancer progression and therapy resistance
Mary Teruel, PhD	Assistant Professor	Chemical Systems Biology	Mentor	Systems biology of cell differentiation & cell signaling in metabolism & cancer
Kevin Wang, MD	Assistant Professor	Dermatology	Mentor	Interdisciplinary approach to studying fundamental mechanisms controlling gene expression in mammalian cells
Irving Weissman, MD	Professor	Pathology – Pathology Stem Cell Institute	Mentor	Clonal events leading from HSC to leukemia stem cells
Marius Wernig, MD	Assistant Professor	Pathology	Mentor	Reprogramming, induced neuronal (iN) cells, pluripotent stem cells
Monte Winslow, PhD	Assistant Professor	Genetics	Mentor, Executive Committee	Mechanisms of cancer progression and metastasis
Joanna Wysocka, PhD	Associate Professor	Chemical Systems Biology	Mentor	Chromatin, epigenetics, stem cells, mechanisms of development plasticity

				cell lineages
Amato Giaccia, PhD	Professor	Radiation Oncology	Mentor, Program Director	We are investigating the role of the HIF pathway in transformed cells
Or Gozani, MD, PhD	Associate Professor	Biology	Mentor, Course leader	Role of chromatin signaling in nuclear programming and disease regulation
Edward Graves, PhD	Associate Professor	Radiation Oncology	Mentor, Course leader	Molecular imaging of cancer radiation biology and the tumor microenvironment
Peter Jackson, PhD	Acting Professor	Microbiology and Immunology	Mentor, Course leader	Cell cycle and cyclin control of DNA relications
Mark Kay, MD, PhD	Professor	Pediatrics and Genetics	Mentor	Gene therapy and non-coding RNA biology
Paul Khavari, MD, PhD	Professor	Dermatology	Mentor	Genome regulation in stem cell differentiation and cancer
Kim Stuart, PhD	Professor	Developmental Biology	Mentor	Mechanisms of aging
Albert Koong, MD, PhD	Professor	Radiation Oncology	Mentor	Role of tumor microenvironment and ER stress in cancer
Calvin Kuo, MD, PhD	Professor	Medicine/ Hematology	Mentor	Genetic screens for oncogenes, GI stem cells, angiogenic receptors/miRNAs
Joseph Lipsick, MD, PhD	Professor	Pathology	Mentor, Course Director	Regulation of gene expression and cancer genetics
Ravindra Majeti, MD, PhD	Assistant Professor	Medicine/ Hematology	Mentor, Course Leader	Characterization and targeting of leukemia stem cells in hematologic cancers
Parag Mallick, PhD	Assistant Professor (Research)	Radiology	Mentor, Course Leader	To apply systems biology's complimentary computational and experimental methods
Beverly Mitchell, MD	Professor	Medicine/Oncology	Mentor	Role of nucleolar proteins in hematological malignancies
Michelle Monje, MD, PhD	Assistant Professor	Neurology	Mentor	Brain development, neural stem cells and pediatric brain tumors
Ashby Morrison, PhD	Assistant Professor	Biology	Mentor, Executive Committee	Chromatin regulation of genome stability
James Nelson, PhD	Professor	Biology	Mentor	Multicellular organization, cell adhesion, protein trafficking, cytoskeleton function
Garry Nolan, PhD	Professor	Microbiology and Immunology	Mentor	Single cell proteomics and genomics of cancer, stem cells, & autoimmunity
Roeland Nusse, PhD	Professor	Developmental Biology	Mentor	Wnt signaling and stem cell control
Anthony Oro, MD,	Professor	Dermatology	Mentor	Mechanisms of epithelial tissue regeneration and

CANCER BIOLOGY STUDENT ROSTER (CURRENT)

Current Students Name Year of Entry	Advisor	Department
Bailey, Alexis 2007	Margaret Fuller	Developmental Biology
Ronan, Jehnna 2007	Gerald Crabtree	Pathology
Williams, Tiffany 2007	Amato Giaccia	Radiation Oncology
Chu, Ci 2008	Howard Chang	Dermatology
Leeman, Dena 2008	Anne Brunet	Genetics
Pech, Matthew 2008	Roeland Nusse	Developmental Biology
Pollina, Elizabeth 2008	Anne Brunet	Genetics
Tan, Si Hui 2008	Roeland Nusse	Developmental Biology
Clarke, Nicole 2009	Jonathan Pollack	Pathology
Corces-Zimmerman, Ryan 2009	Ravindra Majeti	Medicine/ Hematology
Reyes, Terry 2009	Calvin Kuo	Medicine/ Hematology
Schaffer, Bethany 2009	Anne Brunet	Genetics
Barajas, Brook 2009	Paul Khavari	Dermatology
Wapinski, Orly 2009	Howard Chang	Dermatology
Zehnder, Ashley 2009	Paul Khavari	Dermatology
Bhaduri, Aparna 2010	Paul Khavari	Dermatology
Choe, Elizabeth 2010	James Spudich	Biochemistry
Flores, Natasha 2010	Julien Sage	Pediatric/Cancer Biology
O'Brown, Zach 2010	Seung Kim	Developmental Biology
Kovalski, Joanna 2010	Paul Khavari	Dermatology
Lim, Jing Shan 2010	Julien Sage	Pediatric/ Cancer Biology
Mazumdar, Claire 2010	Ravindra Majeti	Medicine/ Hematology
Savig, Erica 2010	Garry Nolan	Microbiology & Immunology
Tran, Rose 2010	Paul Khavari	Dermatology

Turk, Erin 2010	Tim Stearns	Biology
Williams, Jasmine 2010	Brian Feldman	Pediatrics/ Endocrinology
Benham-Pyle, Blair 2011	William J. James Nelson	Biology
Burns, Tyler 2011	Garry Nolan	Microbiology & Immunology
Caswell, Deborah 2011	Monte Winslow	Genetics
Diep, Anh 2011	Amato Giaccia	Radiation Oncology - Radiation Biology
Gawad, Charles 2011	Patrick Brown	Biochemistry
Lee, Luke 2011	Max Diehn	Radiation Oncology
Ouadah, Joe 2011	Mark Krasnow	Biochemistry
Upton, Rosalynd 2011	Irving Weissman	Pathology
Weiskopf, Kipp 2011	Irving Weissman	Pathology
Yang, Dian 2011	Julien Sage & Monte Winslow	Pediatric / Cancer Biology & Genetics
Cristea, Sandra 2012	Julien Sage	Pediatric/ Cancer Biology
Flynn, Ryan 2012	Howard Chang	Dermatology
Fuentes, Daniel 2012	Joanna Wysocka	Chemical & System Biology
Ko, Melissa 2012	Sylvia Plevritis	Radiology/ Diagnostic Radiology
Bennett, Henrietta 2013	Karlene Cimprich	Chemical Systems Biology
Bocek, Michael 2013	Karlene Cimprich	Chemical Systems Biology
Dubreuil, Michael 2013	Michael Bassik	Genetics
Jeng, Edwin 2013	Michael Bassik	Genetics
Koehne, Amanda 2013	Alejandro Sweet-Cordero	Pediatrics
Middleton, Lance 2013	Jon Pollack	Pathology
Morgan, Stefanie 2013	Kevin Wang	Dermatology
Ouyang, Xiangyu 2013	Roeland Nusse	Developmental Biology
Rabe, Amanda 2013	Rotating	Rotating
Atallah, Michelle 2014	Rotating	Rotating
Baskar, Reema 2014	Rotating	Rotating

Dove, Chris 2014	Rotating	Rotating
Grandi, Fiorella 2014	Rotating	Rotating
Hunter, Sean 2014	Rotating	Rotating
Inde, Zintis 2014	Rotating	Rotating
Martins, Maggie 2014	Rotating	Rotating
Mirza, Amar 2014	Rotating	Rotating
Soto, Luis 2014	Rotating	Rotating
Tarangelo, Amy 2014	Rotating	Rotating
Topacio, Ben 2014	Rotating	Rotating



Stanford University
Cancer Biology Program
Laboratory Rotation Evaluation

Graduate Student: _____

Faculty Preceptor: _____

Date of Rotation (quarter and year): _____

The performance of the student was:

Satisfactory _____ Unsatisfactory _____

Comments of the Faculty Preceptor:

Comments of the Student:

Signatures: _____
Faculty Preceptor

Student

Please turn the completed and signed form to Grace Batoon, Cancer Biology Program Office



Stanford University
Cancer Biology Program
Qualifying Examination Form

Candidate: _____

Date of Examination: _____

The qualifying examination committee of the student named above reviewed the written proposal and conducted an oral examination of the student to determine whether the student demonstrated a breadth of knowledge in the field of Cancer Biology, and a depth of knowledge in the chosen area of specialization in which the student plans to pursue Ph.D. thesis research. The performance of the student was:

Satisfactory _____

Unsatisfactory _____

Signature (Chair first)	Name	Academic Title

Comments of the Qualifying Examination Committee:

Please turn the completed and signed form in to Grace Batoon, Cancer Biology Program Office.

Doctoral Dissertation Reading Committee



Stanford University

Please address questions concerning this form and submit the completed form to your home department.

Instructions:

This form is to be submitted by the student to the department graduate studies administrator to initiate the appointment of a doctoral dissertation reading committee.

Deadlines:

This form must be submitted before approval of Terminal Graduate Registration (TGR) status or before scheduling a University oral examination that is a defense of the dissertation. The reading committee may be appointed earlier, according to the department timetable for doctoral programs.

All subsequent changes to the reading committee must be approved by the chair of the major department via the Change of Dissertation Adviser or Reading Committee form. The reading committee must conform to University regulations at the time of degree conferral.

Policy:

See GAP 4.8, for further details on the Doctoral Dissertation Reading Committee (<http://gap.stanford.edu/4-8.html>).

The doctoral dissertation reading committee consists of the principal dissertation adviser and, typically, two other readers. The doctoral dissertation reading committee must have three members and may not have more than five members. All members of the reading committee approve the dissertation. At least one member must be from the student's major department. Normally, all committee members are members of the Stanford University Academic Council or are emeritus Academic Council members.

The reading committee, as proposed by the student and agreed to by the prospective members, is endorsed by the chair of the major department on this Doctoral Dissertation Reading Committee form. The student's department chair may, in some cases, approve the appointment of a reader who is not a current or emeritus member of the Academic Council (via the Petition for Non-Academic Council Doctoral Committee Members form), if that person is particularly well qualified to consult on the dissertation topic and holds a Ph.D. (equivalent foreign equivalent degree). All examiners must hold a Ph.D. degree (or foreign equivalent). Former Stanford Academic Council members and non-Academic Council members may thus on occasion serve on a reading committee.

Any member of the Academic Council may serve as the principal dissertation adviser. If former Academic Council members, emeritus Academic Council members, or non-Academic Council members are to serve as the principal dissertation adviser, the appointment of a co-adviser who is currently on the Academic Council is required. This is to ensure representation for the student in the department by someone playing a major adviser role in completion of the dissertation. However, a co-adviser is not required during the first two years following retirement for emeritus Academic Council members who are recalled to active service. If the reading committee has four or five members, at least three members (comprising the majority) must be current or emeritus members of the Academic Council.

Doctoral Dissertation Reading Committee



Stanford University

Please address questions concerning this form and submit the completed form to your home department.

Student Information:

Last or Family Name	First	Middle
Stanford Student Number (8 digits, first digit is 0)	Department Name	Email Address
Title of Dissertation		
Expected Date for Oral Examination	Expected Date for Submission of Dissertation	

Dissertation Reading Committee Information:

Each member of the dissertation reading committee will certify that the work is of acceptable scope and quality by signing the final copies of the dissertation, which is then submitted to the Graduate Degree Progress Office.

Principal Dissertation Adviser:

Printed name	Department	Academic Council Member?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Title				
Signature	Email address (required)	Date		

Co-Adviser (if required):

Printed name	Department	Academic Council Member?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Title				
Signature	Email address (required)	Date		

Reader:

Printed name	Department	Academic Council Member?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Title				
Signature	Email address (required)	Date		

Reader:

Printed name	Department	Academic Council Member?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Title				
Signature	Email address (required)	Date		

Reader (Optional):

Printed name	Department	Academic Council Member?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Title				
Signature	Email address (required)	Date		

To Be Completed by Department

Signature of Department Chair	Date
Name of Departmental Administrator	Date of Access input

11/2011

Stanford University
Cancer Biology Program



Annual Dissertation Committee Meeting



Graduate Student: _____

Faculty Advisor: _____

Other Reading Committee Members Present:

Date of Committee Meeting: _____

Please have a member of your committee answer the questions and complete the form.

1. Has the student made significant progress since the last committee meeting?
2. Has the research direction changed? If yes, in your honest opinion, is the new project a clearly thought-out project with a testable and interesting hypothesis? Please comment.
3. Do you feel that the student has matured intellectually as a scientist since the last meeting? Please comment.
4. Has the student's mentor shown sufficient care in helping the student identify potential problems and find solutions? Please comment

Please turn the completed and signed form in to Grace Batoon, Cancer Biology Program Office

Cancer Biology Student Annual Review Form:
(to be completed by the mentor)

Dear Faculty Member,

Please assess the student, _____'s progress in the past year. While completing the form, we would like you to comment on the student's quality of research, motivation, efficiency, grasp of literature and knowledge. Note the areas that need improvement. Please submit this form **DIRECTLY** to Grace Batoon, C BIO Program Office – Lokey Stem Cell G2103. Thank you!

1. List the accomplishments in the past year, for each of the projects that the student undertakes:

2. What is the scientific goal for the student's project in the coming year?

3. How close is the work to publication?

4. What is the student's long-term career goal?

Please turn the completed and signed form in to Grace Batoon, Cancer Biology Program Office

5. What suggestions do you find useful at the committee meeting?

6. Other comments?

Please turn the completed and signed form in to Grace Batoon, Cancer Biology Program Office

Cancer Biology Student Annual Review Form:
(to be completed by the student)

Dear _____,

Please assess your own progress in the past year. While completing the form, we would like you to comment on the your mentor's involvement and interactions in your project, and how satisfied you are with the interactions you have with your mentor. Note the areas that need improvement. Please submit this form **DIRECTLY** to Grace Batoon, CBIO Program Office, Lokey Stem Cell, G2103 . Thank you!

1. List the accomplishments in the past year, for each of the projects that you undertake:

2. What is the scientific goal do you and your mentor have in the coming year?

3. How close is the work to publication?

4. What is your long-term career goal? Does the interactions with your mentor change your career-goal? Please comment.

Please turn the completed and signed form in to Grace Batoon, Cancer Biology Program Office

5. What suggestions do you find useful at the committee meeting?

6. Other comments?

Please turn the completed and signed form in to Grace Batoon, Cancer Biology Program Office

Request for TGR Status

Submit in person to:
 Student Services Center
 Tresidder Memorial Union, 2nd Floor
 Monday - Friday, 9 a.m. - 5 p.m.
<http://helpsu.stanford.edu/?pcat=ssc>



Mail or fax to:
 Office of the University Registrar
 Stanford University
 482 Galvez Mall, Suite 120
 Stanford, CA 94305-6032
 Fax: (650) 725-7248

Please type or print

Printed Name of Student (Last)	(First)	(Middle)
Stanford Student Number (8 digits, first digit is 0)	Phone Number	Email Address
Department	Degree	Quarter/Year for which TGR is requested

Terminal Graduate Registration (TGR) allows students to register at a reduced tuition rate while they work on a dissertation, thesis, or department project. Students registered in TGR status must enroll each quarter in a TGR course, either 801 or 802. Submit the petition prior to the beginning of the quarter for which the request is being made. Students with more than one graduate degree program must complete their total residency for all programs in order to apply for TGR status.

To be completed by student and department: indicate degree program for which TGR status is requested, and verify eligibility.

- | | |
|---|--|
| <input type="checkbox"/> Ph.D. | <input type="checkbox"/> Satisfactory completion of all courses on the Application for Candidacy; if the program has changed, an Academic Program Revision form must be approved by the department.
<input type="checkbox"/> 135 completed units of residency prior to TGR start quarter and completed residency requirement for all active and completed degree programs.
<input type="checkbox"/> Submission of Doctoral Dissertation Reading Committee form to the department |
| <input type="checkbox"/> Engineer | <input type="checkbox"/> Satisfactory completion of all courses on the Application for Candidacy; if the program has changed, an Academic Program Revision form must be approved by the department.
<input type="checkbox"/> Accrual of 90 completed units of residency prior to TGR start quarter and completed residency requirement for all active and completed degree programs. |
| <input type="checkbox"/> M.A./M.S. | <input type="checkbox"/> Satisfactory completion of all courses on the Program Proposal for a Master's Degree; if the program has changed, an Academic Program Revision form must be approved by the department.
<input type="checkbox"/> Accrual of completed 45 units of residency (or 3 terms for students on term-based residency) prior to TGR start quarter and completed residency requirement for all active and completed degree programs.
<input type="checkbox"/> This master's program requires project or thesis ("Thesis etc." milestone, entered by department) |
| <input type="checkbox"/> Final Registration | <input type="checkbox"/> May be granted for one quarter only to a graduate student who is returning after reinstatement, working on incompletes in his or her final quarter, or registering for one final term after all requirements are completed when Graduation Quarter is not applicable. |

Signatures

		Date
<input type="checkbox"/> Approved	Signature of Departmental Adviser	Printed Name
<input type="checkbox"/> Approved	Signature of Departmental Graduate Studies Administrator	Date

Registrar's Office

<input type="checkbox"/> Approved		Printed Name	Date
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08/2013

University Oral Examination



Stanford University

Please address questions concerning this form and submit the completed form to your home department.

Instructions:

This form is to be submitted by the student or committee chair to the department graduate studies administrator to:

The University Oral Examination form is used to:

1. Initiate and approve the appointment of the student's University Oral Examination Committee.
2. Schedule the examination officially, including:
 - Date, time, and location of the examination
 - Type of examination
 - Title of dissertation or subject of examination
3. Record the result of the examination.

Deadlines:

This form should be submitted by the student to the department graduate studies administrator at least two weeks prior to the examination date.

Policy:

See GAP 4.7 for further detailed information on the University Oral Examinations and Committees (<http://gap.stanford.edu/4-7.html>).

Passing a University oral examination is a requirement of the Ph.D. and J.S.D. degrees. The purpose of the examination is to test the candidate's command of the field of study and to confirm fitness for scholarly pursuits. Departments determine when, after admission to candidacy, the oral examination is taken and whether the exam will be a test of knowledge of the field, a review of a dissertation proposal, or a defense of the dissertation. The chairperson of a Stanford oral examination is appointed for this examination only, to represent the interests of the University for a fair and rigorous process.

Membership:

The University Oral Examination Committee consists of at least five Stanford faculty members: four examiners and the committee chair from another department. All committee members are normally members of the Stanford University Academic Council, and the chair must be a member. Emeritus faculty are also eligible to serve as examiners or chair of the committee.

A petition for appointment of an examining committee member who is neither a current or emeritus member of the Academic Council may be approved by the chair of the department if that person contributes an area of expertise that is not readily available from the faculty and holds a Ph.D. or equivalent foreign degree. The majority of the examiners must be current or emeritus Academic Council members; more specifically, one of four or five examiners or two of six or seven examiners may be appointed to the Oral Examination Committee by means of this petition.

The chair of the examining committee may not have a full or joint appointment in the adviser's or student's department, but may have a courtesy appointment in the department. The chair can be from the same department as any other member(s) of the examination committee and can be from the student's minor department provided that the student's adviser does not have a full or joint appointment in the minor department.

For Interdisciplinary Degree Programs (IDPs), the chair of the examining committee may not have a full or joint appointment in the primary adviser's major department and must have independence from the student and adviser. The Department of Electrical Engineering and the School of Education have been granted exceptions to this policy, whereby "out-of-department" may include a faculty member from another division of the department or school.

Responsibility for appointing the out-of-department oral examination chair rests with the candidate's major department. Many departments invite advisers to participate in the process of selecting and contacting potential chairs. The department should not require the student to solicit the out-of-department chair, although the student may participate in selecting and contacting potential chairs.

Scheduling the Oral Examination:

Department policy determines when, after admission to candidacy, the oral examination is taken. Timing of the examination depends on department policy, on the nature of the examination, and on the estimated readiness of the student. The examination may be scheduled at any time during the year, unless otherwise specified by department policy.

Students must be registered in the term in which the university oral examination is taken. The period between the last day of final exams of one term and the day prior to the first day of the following term is considered an extension of the earlier term. Candidacy must also be valid.

If a member cannot attend the scheduled examination, the examination is rescheduled.

With the agreement of the primary adviser and student, a member of the University oral examination committee may participate by telephone or video conferencing. The primary adviser, the student, and the out-of-department chairperson must be present and may not participate virtually. If the conferencing technology fails and the examiner cannot participate, the committee may fail to reach its quorum. In this case, the examination must be rescheduled.

University Oral Examination



Stanford University

Please address questions concerning this form and submit the completed form to your home department.

Student Information:

Last or Family Name	First	Middle
_____	_____	_____
Stanford Student Number (8 digits, first digit is 0)	Email Address	
_____	_____	
Department Name	Minor Department (if applicable)	
_____	_____	

Student Status: Valid candidacy Registered in exam quarter Reading committee form submitted (required for dissertation defense)

Examination Information:

Expected Date for Oral Examination	Time	Location
_____	_____	_____
<input type="checkbox"/> Area examination <input type="checkbox"/> Dissertation proposal <input type="checkbox"/> Dissertation defense		
Dissertation or Proposal Title		

Orals Committee Composition Information:

University Chair:	Printed name	Department
	_____	_____
	Title	Academic Council Member? <input type="checkbox"/> Yes <input type="checkbox"/> No
	_____	_____
Principal Adviser:	Printed name	Department
	_____	_____
	Title	Academic Council Member? <input type="checkbox"/> Yes <input type="checkbox"/> No
	_____	_____
Examiner:	Printed name	Department
	_____	_____
	Title	Academic Council Member? <input type="checkbox"/> Yes <input type="checkbox"/> No
	_____	_____
Examiner:	Printed name	Department
	_____	_____
	Title	Academic Council Member? <input type="checkbox"/> Yes <input type="checkbox"/> No
	_____	_____
Examiner:	Printed name	Department
	_____	_____
	Title	Academic Council Member? <input type="checkbox"/> Yes <input type="checkbox"/> No
	_____	_____

By signing below, we affirm that the student's academic status and the committee composition meet the guidelines for University oral examinations.

Chair, Major Department: Signature	Printed Name	Date
_____	_____	_____
Chair, Minor Department: Signature	Printed Name	Date
_____	_____	_____

Oral Examination Results:

- University procedures were followed in conducting this oral examination.
 All of the above members were present and voting
The candidate Passed Failed the examination.

Signature of Chair of the Oral Examination Committee _____ Date _____

Name of Departmental Administrator _____ Date of Access input _____

11/2011

Petition for Graduate Student Graduation Quarter

Submit in person to:
Student Services Center
Tresidder Memorial Union, 2nd Floor
Monday - Friday, 9 a.m. - 5 p.m.
<http://helpsu.stanford.edu/?pcat=ssc>



Mail or fax to:
Office of the University Registrar
Stanford University
482 Galvez Mall, Suite 120
Stanford, CA 94305-6032
Fax: (650) 725-7248

Please type or print

Last or Family Name	First	Middle
Stanford Student Number (8 digits, first digit is 0)	Phone Number (including area code)	Email Address
Department	Graduate/Professional Degree(s)	Requested Quarter/Year

Registration is required for the term in which a student submits a dissertation or has a degree conferred. Students who meet all the following conditions are eligible to be assessed a special tuition rate for the quarter in which they are receiving a degree.

Verify eligibility below:

- All course work, degree requirements, oral exams, and residency requirements have been completed prior to the start of the requested term with the exception of the dissertation/project or thesis.
- The graduate/professional student has only to submit the dissertation/project or master's thesis by the deadline for submission in the term designated as the Graduation Quarter.
- The student has formally submitted the application to graduate via Axess.
- The student has filed all necessary forms regarding Graduation Quarter before the first day of the requested term chosen for the Graduation Quarter (late study list fee applies after deadline).
- A graduate or professional student must have an active program status, which may include an approved leave of absence, in the term immediately preceding the requested Graduation Quarter (not applicable for undergraduates).
- The student has enrolled in the appropriate 801 or 802 course:
 - Ph.D./D.M.A. candidates should enroll in their designated TGR 802 course.
 - Engineering degree candidates should enroll in their designated TGR 801 course.
 - M.A./M.S. candidates with a thesis or special project should enroll in their designated dept. 801 course.
 - All other degree candidates will be enrolled by the Registrar's office upon approval of this form.

Students on Graduation Quarter are registered at Stanford and, therefore, have the rights and privileges of registered students. Graduation Quarter tuition fees are list at <http://studentaffairs.stanford.edu/registrar/students> under the Finances section, and students are assessed University health insurance (unless waived) and ASSU fees. Students on an approved Graduation Quarter may not be registered in courses other than the appropriate 801 or 802 course. Only one Graduation Quarter may be requested. Students who do not graduate during the Graduation Quarter are assessed a higher, standard tuition rate in subsequent terms.

Form Deadline: The Preliminary Study List Deadline (first day of classes) of the effective quarter.

By signing below, I certify that the information contained on this petition and all supporting documentation is true and accurate. I understand that misrepresentation of fact and circumstance may give rise to a complaint being filed with the Office of Community Standards for investigation as a possible violation of the Fundamental Standard.

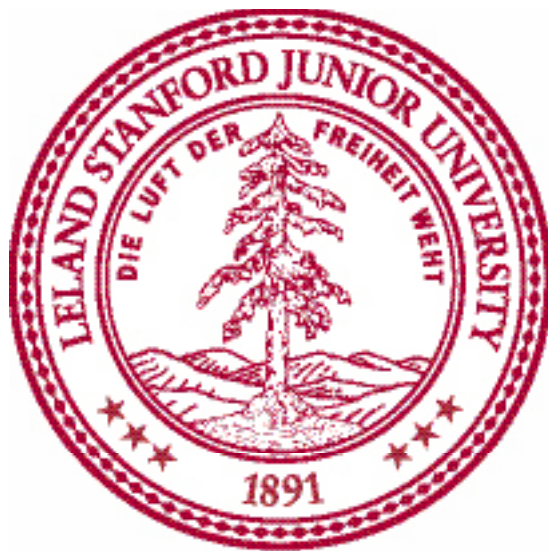
Student Signature	Date
Major Department/School Administrator Signature	Date
International Students (F-1 & J-1 Visa Holders Only): Bechtel International Center Adviser Signature	Date

REGISTRAR USE ONLY

Verification of student's eligibility to designate a Graduation Quarter: _____

08/2013

DIRECTIONS FOR PREPARING DOCTORAL DISSERTATIONS 2013-14



Office of the University Registrar
Stanford University

version last updated: 2013-10-18

DIRECTIONS FOR PREPARING DOCTORAL DISSERTATIONS

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CHECKLIST FOR SUBMISSION OF DISSERTATION

Review and complete all the checklist items before coming into the office for final submission of your dissertation.

1. _____ Four unbound copies of dissertation with original signature pages inserted. (Only three copies are required from students in Geophysics, Education, Art, Music, or Law.) The copy for Proquest must be single-sided, and can be on regular (non-acid-free) paper.
2. _____ “Application to Graduate” filed online through Axxess by the appropriate deadline.
_____ A signed “Certificate of Final Reading of Dissertation.” (See page 9 for form.)
_____ “Survey of Earned Doctorates” is filled out and ready to submit.
_____ “Doctoral Dissertation Agreement Form” for Proquest, available online at <http://registrar.stanford.edu/pdf/ProQuestPA.pdf> is filled out and ready to submit.
_____ One separate copy of the signed abstract, formatted for publication with approval signature. (See page 13 for instructions.)
_____ Three additional copies of the dissertation title page (plain paper).
_____ Written approval for any copyrighted material that appears in the dissertation.
_____ Before preparing the submission, discuss the embargo and other release options with any co-authors and your advisor.
3. _____ Receipt from the Cashier's Office for payment of the following fees. (See page 4.)
_____ \$126.00 for the four University copies of the dissertation.
_____ \$65.00 copyright fee (optional).
_____ \$95.00 open access fee (optional).
_____ Additional fees (if any) for maps, mounted photo pages, CD pockets, etc. (See page 4.)
4. *Final Format Check*
_____ Title page formatted correctly.
_____ Abstract in the dissertation is formatted consistently with the rest of the manuscript.
_____ Margins: 1.5 inches on binding edge and one inch on all other sides. After printing, measure margins for accuracy.
Double-sided copies: margins must be re-aligned on binding edge.
_____ Type size 10 point or larger; characters are crisp and easily read.
_____ Body of dissertation printed in 1.5 or double spacing.
_____ Pagination is continuous and placement of numbers is consistent throughout the manuscript. (See page 6.)
_____ Words and text are divided correctly.
_____ The dissertation is ready-for-publication in appearance. Final copies are cleanly reproduced and all pages are in order.
5. *Appointments:* For appointment scheduling, go in person to the Student Services Center at Tresidder Memorial Union, 2nd floor, file a HelpSU ticket (Request Category = Student Services, Request Type = Student Services Center), or call the dissertation appointment phone at (650) 721-1569. Include the following information: desired day for appointment, full name, phone number, and student ID.
Note: the Student Services Center sets up and schedules all dissertation related appointments but both format and submission appointments actually take place at the Office of the University Registrar located at 482 Galvez Mall, Suite 120.
_____ *Final Format Check:* We recommend that you make an appointment as early as feasible to meet with the Office of the University Registrar to have your thesis reviewed before you create all of the final copies. Note: format checks will not be done in the final week of the submission deadline.
_____ *Final Submission:* We recommend that you make an appointment as early as feasible to submit your thesis and meet the applicable posted deadlines. Stanford does not allow remote format checks or submissions.

SUBMISSION DEADLINES FOR CONFERRAL, ACADEMIC YEAR 2013-14

	<u>Autumn Quarter</u>	<u>Winter Quarter</u>	<u>Spring Quarter</u>	<u>Summer Quarter</u>
Thesis/Dissertation Submission Deadline	December 6 <i>(noon)</i>	March 14 <i>(noon)</i>	June 4 <i>(noon)</i>	August 29 <i>(noon)</i>
Application to Graduate	November 15	February 28	April 11	August 1
Conferral Date	January 9	April 3	June 15	September 25

For further information, please contact:

Ron Racilis, Records Officer
Email: edissertations@lists.stanford.edu
Office of the University Registrar
Stanford University
482 Galvez Mall
Suite 120
Stanford, CA 94305-6032
Phone: (650) 223-9089

For help: File a HelpSU ticket (Request Category: Student Services, Request Type: Student Services Center) or use this direct link: <https://helpsu.stanford.edu/?pcat=StuAcct>

Further information on services provided by the Registrar's Office is available at <http://registrar.stanford.edu>.

DIRECTIONS FOR PREPARING DOCTORAL DISSERTATIONS

The doctoral dissertation is expected to be an original contribution to scholarship or scientific knowledge, to exemplify the highest standards of your discipline, and to be of lasting value to the intellectual community. The following guidelines have been established to fulfill this commitment and represent the minimal standards for professional presentation of your doctoral work. Please read them carefully to avoid costly and time-consuming revisions. ***Do not use previously approved dissertations as a guide for preparations of your manuscript. The current guidelines will be enforced.***

A dissertation that does not conform to the minimum University standards may have to be redesigned and resubmitted, with the possibility of delay in conferral of the degree. The Office of the University Registrar publishes these directions and is responsible for review of dissertations. The staff encourages students to ask questions about dissertation format before final preparation of the manuscript and to ***bring a sample to the office for review prior to the reproduction of the required copies.***

Stanford University is committed to the preservation and dissemination of the scholarly contributions of its students. Stanford doctoral dissertations are microfilmed by Proquest. The Committee on Graduate Studies believes that this practice is of value to library patrons, to researchers, to the learned community at large, and also to the author whose work receives wide and accessible dissemination. Some of these specified procedures are designed to ensure optimal microfilms. A submission checklist for the dissertation is found on page 8 of this handbook.

PROCEDURES FOR SUBMISSION OF THE DISSERTATION

REGISTRATION

The student must be registered or on graduation quarter status for the term in which the dissertation is submitted. Registration is also required for the quarter in which the University oral examination is taken. Registration must be completed by the end of the second week of that quarter.

PROGRAM REQUIREMENTS

Candidacy must be valid when the degree is conferred. Before submission of the dissertation, students should be sure that their department has documented any changes in the composition of the reading committee, and that any relevant milestones have been completed in our system. If you have any questions about the status of your milestones, please see the student services officer in your department.

HOLDS

Students with unmet financial obligations resulting in the placement of a hold will not receive a transcript, statement of completion, degree certificate, or diploma until the hold is released by Student Financial Services. Please see that your financial obligations are in order before submission of the dissertation.

DEADLINES

The deadline for submission of dissertations, if you wish to have your degree conferred at the end of the quarter, is published in the Academic calendar, available at <http://studentaffairs.stanford.edu/registrar/academic-calendar>; see page 2 for specific dates. Some departments may set earlier deadlines for submission of dissertations.

Dissertation deadlines are strictly enforced. No exceptions are made. The final dissertation with all required signatures must be submitted to the Office of the University Registrar by noon on the final submission deadline date. The deadline is set as late in the quarter as is possible, providing the time necessary for review of the dissertation and final degree requirements by the Registrar's Office and the department. Students are strongly encouraged to submit their dissertations at least two weeks prior to this deadline to insure that all requirements can be met in time for the conferral of the degree. Once a student submits the required copies of their dissertation to the Stanford University Registrar's Office, no further changes are permitted.

FORMAT CHECK AND SUBMISSION APPOINTMENTS

It is recommended that all students make an appointment for a both a dissertation format check and submission. *Note:* format checks will not be done in the final week of the submission deadline. To assure a time slot, appointments for format checks and submissions should be made well in advance. Students must submit their dissertation in the quarter in which they have applied to graduate. In order to avoid scheduling conflicts, appointments to submit dissertations will begin with the first day of the quarter for which a student has applied to graduate, and no earlier.

Appointments: For appointment scheduling, go in person to the Student Services Center at Tresidder Memorial Union, 2nd floor, file a HelpSU ticket (Request Category = Student Services, Request Type = Student Services Center), or call the dissertation appointment phone at (650) 721-1569. Include the following information: desired day for appointment, full name, phone number, and student ID.

APPLICATION TO GRADUATE

An “Application to Graduate” should be filed through Axess early in the degree quarter but no later than the date specified in the academic calendar for that quarter. (See page 2 for deadlines.) Students applying for Summer, Autumn, or Winter Quarter conferral receive their diplomas at Commencement in the Spring Quarter. They must file the “Application to Graduate” by the deadline for the conferral quarter.

COPYRIGHT REVIEW

Managing copyright is an important responsibility in one’s academic career. For this reason, students are required to review a resource on copyright and other publication considerations prior to submission of a thesis or dissertation for publication by Stanford. This review is one of the pre-submission criteria required of all submitting students. Produced by Stanford University Libraries in consultation with the Office of the General Counsel, “Copyright & Publication Considerations for Dissertation Authors” is a slide presentation available on the Libraries’ web site (http://sulair.stanford.edu/about_sulair/special_projects/stanford_etd_project_copyright_info.html). The link is available in the eDissertation/eThesis Center within Axess. Students are encouraged to review this resource as early as possible in the dissertation preparation process.

PUBLICATION AGREEMENT

The “Doctoral Dissertation Agreement Form” authorizes publication of the dissertation and the abstract by Proquest. Through micropublication, the dissertation becomes readily available to the research community in microfilm or electronic format. Microfilm and paper copies of the dissertation may be ordered from Proquest at the time of submission of the dissertation or six to eight months after the conferral of the degree. Proquest publication agreement forms are available online at <http://registrar.stanford.edu/pdf/ProQuestPA.pdf>.

DELAYED RELEASE (EMBARGO)

An author has the option to delay the release of a dissertation through ProQuest and to search engines outside of Stanford and other third party distributors. Release delay options are: 6 months, 1 year, or 2 years. Under an embargo, the dissertation will be available to those who have access to the Stanford University Libraries

The embargo option may be appropriate for a student who has a patent application in process or wants to delay access to the dissertation for a limited amount of time in order to pursue commercial interests or other publication. Submitting and having your dissertation cataloged will be considered a public disclosure per article 35 U.S.C. 102 of the United States Patent and Trademark Office, even if you choose to embargo your dissertation. If you have any questions, please contact Stanford’s Office of Technology Licensing at (650) 723-0651 or info@otlmail.stanford.edu.

If your thesis or dissertation includes any research conducted as part of an active grant-funded project, discuss the embargo option with the project’s principal investigator. Multiple authorship has implications with respect to copyright and public release of the material. Be sure to discuss copyright clearance and embargo options with your co-authors and your adviser well in advance of preparing your thesis for submission.

Embargoes may be lifted early at the request of the author by contacting UMI/ProQuest directly.

A student may not select embargoed status in lieu of obtaining appropriate copyright permissions. A dissertation, in its entirety, will be governed by only one level of distribution at any given time; the work may not be subdivided with sections disseminated under differing levels of distribution.

If you have any questions about whether you should embargo your dissertation, please consult with your adviser.

FEES

Payment of fees should be made to the University Cashier. Your check must be made payable to Stanford University and have your student ID number as well as the following account number written on it: 1003627-10-EAIGP. Cashier hours are 9:00 a.m. to 5:00 p.m., Monday through Friday. Dissertation fees can be paid by cash or check; no credit card or debit cards are accepted. Bring the receipt with you when submitting your dissertation. The following fees will be charged:

- \$ 126 — for microfilming, publishing of abstract, and binding of required copies of dissertation.
- \$ 65 — copyright registration fee (optional).
- \$ 95 — open access fee
- \$ 10 — fee for each map pocket or CD pocket.
- \$0.35 — fee for each mounted photo page or fold-out page.

SURVEY OF EARNED DOCTORATES (SED)

Stanford participates in a data collection project of the National Science Foundation, the Department of Education, the National Endowment for the Humanities, the National Institutes of Health, and the Department of Agriculture. Stanford asks that you complete this survey; links to these options are available on the Registrar’s thesis/dissertation web site at <http://studentaffairs.stanford.edu/registrar/students/dissertation-thesis>

- *Paper option, hard copy of pdf:* Submit completed hard copy of SED to Student Services Center.
 - Download at http://www.norc.org/PDFs/SED-Findings/Fillable%20Quex%202014_FINAL.pdf
- *Online option:* Register with SED at <http://www.norc.org/projects/survey+of+earned+doctorates.htm>. Complete and submit SED online. <http://survey.norc.uchicago.edu/doctorate/index.jsp>

THE ABSTRACT

An abstract may be included in the preliminary section of the dissertation. The abstract in the body of the dissertation follows the style used for the rest of the manuscript and should be placed following the signature page. There is no maximum permissible length for the abstract in the dissertation.

A separate abstract is published in Dissertation Abstracts International by Proquest. This abstract must be carefully formatted and prepared to give a succinct account of the dissertation, including a statement of the problem, procedure and methods, results, and conclusions. See page 13 for an example of the required format. Please note that this abstract must be signed by one member of the Reading Committee.

DISSERTATION COPIES

Four unbound copies with original signature pages are required (students in Geophysics, Education, Art, Music, and Law submit only three copies). Copies are distributed to the University Library, Archives, the department, and Proquest. (The copy for Proquest must be printed single-sided.) The author is reminded to keep an extra manuscript copy for personal use during the binding process, since copies will be inaccessible.

OBTAINING BOUND COPIES FOR PERSONAL USE

The Office of the University Registrar does not provide bound copies of the dissertation for personal use. Students who want additional dissertation copies bound for personal use have a few options available below.

Option 1: Bring printed copies to the Binding and Finishing office in Meyer Library (room 380). The cost is \$16.00 per bound copy; exact amount can be paid in either cash or check payable to Stanford University. There is a 4-6 week turnaround time. Students will be informed when to pick the bound copies in the Binding and Finishing office. Contact Roddy Harrison with questions at roddyh@stanford.edu or (650) 736-2011.

Option 2: Students who want to pay by credit card or desire rush or direct shipment may take printed copies to Postal Annex, 30166 Industrial Parkway SW, Hayward, CA 94544 (located in the Targer Center at Industrial and Whipple; 510-487-4017. These copies will be shipped off to the HF Group Bindery for binding and then shipped directly to the student. Students should request "Stanford Style Ph.D" for binding identical to that used by Stanford. For questions related to this binding option please call: HF-Group Customer Service: (800) 253-5456.

CERTIFICATE OF FINAL READING OF DISSERTATION

One member of the Reading Committee must certify that he or she has reviewed the final draft of the dissertation as submitted to the Office of the University Registrar. A form for that purpose is included in this handbook and may be photocopied and used (see page 9). There is no need to create a new form for this purpose.

THE DISSERTATION

The final dissertation manuscript must have a ready-for-publication appearance; it must have standardized features and be attractively reproduced. The Office of the University Registrar does not endorse or verify the accuracy of *any* dissertation formatting templates that may be available to students. It is the responsibility of the student to make sure that the formatting meets the requirements outlined in this booklet. Introductory material, text, and appendices must all be clearly and consistently prepared and must meet all of the following specifications:

Paper

High-quality, long-lived, acid-free (neutral pH) bond paper must be used for the University copies of the dissertation. To confirm that the paper is acid-free, please check the packaging. Check with the manufacturer if you believe the paper is acid free, but is not indicated on the packaging. The cotton content is at the sole discretion of the student. The Proquest copy and personal copies may be on standard photocopy paper. Photographic paper may be used in lieu of acid-free paper for images; there is no extra charge, as there is with separately mounted photos.

The final copies must produce consistent print quality without gray or dark casts to the background.

All copies must be on white, 8.5 x 11 inch paper. Double-sided copies may be submitted, but please be sure that the margins are re-aligned on the binding edges to 1.5 inches. The copy for Proquest must be submitted single-sided.

Typeface

Type size should be 10 point or larger. Do not use script, or ornamental fonts. Print must be letter quality or near letter quality with dark black characters that are consistently clear, crisp, and easily read. Accent marks and hand annotations must be done neatly in black ink.

Margins

Margins on the binding edge (left edge if single-sided; right edge for even numbered pages, and left edge for odd numbered pages if double-sided) must be 1.5 inches; all other margins must be one inch. (Pagination, headers, and/or footers may be placed within the margin, but no closer than one-half inch from the edge of the page.) **For double-sided copies, margins must be 1.5 inches on the binding edge.** Suggested margins when using MS Word are 1.6 inches for the binding edge and 1.1 inches for all other margins.

Spacing

One and a half or double spacing is required in the main body of the manuscript except where conventional usage calls for single spacing; e.g., footnotes, indented quotations, tables, etc.

Word and Text Divisions

Words must be divided correctly at the end of a line and may not be divided from one page to the next. Use a standard dictionary to determine word division. Avoid short lines that end a paragraph at the top of a page, and any heading or subheading at the bottom of a page that is not followed by text.

Language

The dissertation must be in English. Exceptions are granted by the school dean upon submission of a written request from the chair of the student's major department. Approval for writing the dissertation in another language is normally granted only in cases where the other language or literature in that language is also the subject of the discipline. Approval is routinely granted for dissertations in the Division of Literature, Cultures, and Languages within department specifications. Dissertations written in another language must include an extended summary in English (usually 15-20 pages in length). The abstract for Proquest must also be in English.

Style

Select a standard style approved by your department and use it consistently. Some reliable style guides are K.A. Turabian's *A Manual for Writers of Term Papers, Theses and Dissertations* (University of Chicago Press), the *MLA Handbook for Writers of Research Papers, Theses, and Dissertations* (Modern Language Association), and *Preparation of Archival Copies of Theses and Dissertations* by Jane Boyd and Don Etherington (American Library Association).

Reproducing the Dissertation

Final copies of the dissertation must be clear and attractive. Review each copy for evenness and clarity of type, missing pages, and crooked text. Colored paper should separate volumes and copies.

Order and Content

1. Preliminary Pages
 - a. Title Page — The format must be followed exactly. Use upper case letters (see page 11 for sample). The title of the dissertation should be a meaningful description of the content of the manuscript. Use word substitutes for formulas, symbols, superscripts, subscripts, Greek letters, etc. The month and year must be the actual month and year in which you submit your thesis to the Office of the University Registrar.
 - b. Copyright Notice Page (date is *year of conferral*) — Center on page as follows:

© Copyright by Jane Jones 2014
All Rights Reserved
 - c. Signature Page — The readers who sign the signature page must be endorsed on the Doctoral Dissertation Reading Committee form. Any changes in the composition of the Reading Committee must be approved by the department chair and recorded online by the department administrator. All signatures on the signature page must be original. No photocopies of signature pages are allowed for the four University copies. (See page 12 for sample.)
 - d. Abstract.
 - e. Preface and/or Acknowledgments.
 - f. Table of Contents, with page references.
 - g. List of Tables, with titles and page references.
 - h. List of Illustrations, with titles and page references.
2. Text
 - a. Introduction.
 - b. Main body, with the larger divisions and more important sub-divisions indicated by suitable, consistent headings.
3. References
 - a. Appendices.
 - b. Bibliography or List of References.

Pagination

Each page of the manuscript, including all blank pages, and pages with photographs, tables, figures, maps, and computer program printouts should be assigned a number. Consistent placement of pagination, at least one-half inch from the paper's edge, should be used throughout the manuscript. If previously published papers are included, the pagination for the dissertation must be distinct and it is recommended that the pagination for the published work be removed.

Important: The following pagination plan should be used:

1. For the preliminary pages, use small Roman numerals (i, ii, iii, iv, etc.). The title page does not have a number but counts as page i; the following page is ii. The placement of these numbers should be consistent on each page.
2. For the remainder of the manuscript, use continuous pagination for text, illustrations, images, appendices, and bibliography, using Arabic numbers (1, 2, 3, etc.). **Remember to start with page 1**, as this is not a continuation of the Roman numeral numbering.

Landscape

For text, illustrations, charts, graphs, etc., printed in landscape form, the orientation should be facing away from the bound edge of the paper.

Photographs, Maps, and Charts

All photographs should be of professional quality. Large maps and charts should be avoided. Where necessary, they must be folded to 10.5 x 7.5 inches or smaller; they will be in pockets in the bound dissertations. The fee for binding of mounted photographs is \$.35 per page. The fee for map pockets is \$10.00 per pocket.

Double Volumes

If the dissertation is more than three inches thick, it must be bound in two volumes. The title pages carry volume designations. Each volume must have preliminary pages except that the signature page, preface, abstract, and acknowledgments are not included in the second volume. Pagination of text pages must be continuous from one volume to the next.

Scholarly Reference

In choosing an annotation or reference system, students should be guided by the practice of their various disciplines, and the recommendations of their departments. In addition to the general style guides listed under "Style" above, there are specific style guides for some fields. When a reference system has been selected, it should be used consistently throughout the dissertation. The placement of footnotes is at the discretion of the student with reading committee approval.

An important aspect of modern scholarship is the proper attribution of authorship for joint or group research. If the manuscript includes joint or group research, you must clearly identify your contribution to the enterprise in an introduction.

Published Papers and Multiple Authorship

The inclusion of published papers in a dissertation is the prerogative of the major department. Where published papers or ready-for-publication papers are included, the following criteria must be met:

1. There must be an introductory chapter that integrates the general theme of the research and the relationship between the chapters. The introduction may also include a review of the literature relevant to the dissertation topic that does not appear in the chapters.
2. Multiple authorship of a published paper should be addressed by clearly designating, in an introduction, the role that the dissertation author had in the research and production of the published paper. The student must have a major contribution to the research and writing of papers included in the dissertation.
3. There must be adequate referencing of where individual papers have been published.
4. Written permission must be obtained for all copyrighted materials; letters must be attached to the Publication Agreement.
5. The submitted material must be in a form that is legible and reproducible as required by these specifications. The Office of the University Registrar will approve a dissertation that includes published material only if all margins are adequate to allow for proper binding, if typeface is acceptable for legible reproduction by Proquest (10 point or larger, 10 to 12 characters per inch), and if there are no other deviations from the normal specifications which would prevent proper dissemination and utilization of the dissertation. If the published material does not correspond to these standards, it will be necessary for the student to reformat that portion of the dissertation.
6. Multiple authorship has implications with respect to copyright and public release of the material. Be sure to discuss copyright clearance and embargo options with your co-authors and your advisor well in advance of preparing your thesis for submission.

Use of Copyrighted Material

If copyrighted material belonging to others is used in your dissertation, you must give full credit to the author and publisher of the work used and if the quotation exceeds “fair use,” you must obtain permission from the copyright owner. According to the Association of American University Presses, permission is required for quotations that are reproduced as complete units (poems, letters, short stories, essays, journal articles, complete chapters or sections of books, maps, charts, graphs, tables, drawings, or other illustrative materials). In determining whether other excerpts from copyrighted materials exceed “fair use” criterion, the primary considerations are length and substantiality of the portion quoted, the nature of the copyrighted work quoted, the effect of the use on the market for or value of the quoted work, and the purpose and character of your use including whether it is commercial in nature or for nonprofit educational use. If you are in doubt, it is of course safest to obtain permission.

Permission to use copyrighted material is obtained from the owner of the copyright. Proquest requires copies of permission letters to be attached to the publication agreement, and assumes no liability for copyright violations.

Copyrighting Your Dissertation

Copyright protection is automatically in effect from the time the work is in fixed form. A proper copyright notice on all copies, including microfilm copies, will prevent the work from falling into the public domain (loss of copyright). Copyright notice should consist of the word “Copyright” and the symbol “C” in a circle, the year of first publication, and the name of the copyright owner (your name) in a reasonably prominent place (see page 6).

Proquest offers a copyright service to authors of doctoral dissertations. They will, on your behalf, file an application for registration of a copyright on your manuscript if you authorize them to do so on the Publication Agreement form. The \$65 fee for this optional service is paid to the Stanford University cashier when you pay the publishing and binding fee.

Registration of copyright is not required, but it establishes a public record of your copyright claim and enables copyright owners to litigate against infringement. You need not register your copyright with the U.S. Copyright Office at the outset, although registration must be made before the copyright may be enforced by litigation in case of infringement. Early registration does have certain advantages: it establishes a public record of your copyright claim, and if registration has been made prior to the infringement of your work, or within three months after its publication, qualifies you to be awarded statutory damages and attorney fees in addition to the actual damages and profits available to you as the copyright owner (should you ever have to sue because of infringement).

CERTIFICATE OF FINAL READING OF DISSERTATION

One member of the Reading Committee must certify that he or she has reviewed the final draft of the dissertation as submitted to the Records Office (the form below may be removed or copied from this booklet to be used for this purpose). The final reading of the dissertation should include a review of the following:

Content

All suggested changes have been taken into account and incorporated into the manuscript where appropriate. If the manuscript includes joint group research, the student's contribution is clearly explained in an introduction.

Format

Margin size of 1.5 inches on the binding edge (left edge if single-sided; right edge for even-numbered pages, and left edge for odd-numbered pages if double-sided) and one inch on all other sides; 10 point or larger type size; clearly formed characters; correct divisions of words and text; continuous pagination; 1.5 or double-spaced text (main body); bibliography and footnotes are consistently formatted; all tables and illustrations are in order and appropriately annotated.

Published Materials

If previously published materials are included in the dissertation, publication sources are indicated, written permission has been obtained for copyrighted materials, and all of the dissertation format requirements have been met.

Appearance

The dissertation is ready-for-publication in appearance and ready for microfilming and binding.

Photocopy

This page may be photocopied, completed, and signed for submission.

To the University Committee on Graduate Studies:

I certify that I have read the dissertation of _____
in its final form for submission and have found it to be satisfactory.

Signature

Date

(Printed Name of Reader)

(Printed Name of Your Department)

SAMPLE TITLE PAGES FOR Ph.D. DISSERTATION

The title page must meet these specifications including the use of upper-case letters and must be centered within the margins both vertically and horizontally. There should be no bold type on the title page.

MONEY, POWER, AND TRUTH:
ECONOMIC WARFARE IN THE ERA OF GLOBALIZATION

VOLUME I

(If more than one volume)

A DISSERTATION

SUBMITTED TO THE DEPARTMENT OF HISTORY

AND THE COMMITTEE ON GRADUATE STUDIES

OF STANFORD UNIVERSITY

IN PARTIAL FULFILLMENT OF THE REQUIREMENTS

FOR THE DEGREE OF

DOCTOR OF PHILOSOPHY

Jane Lathrop Stanford

May 2014

(Date should reflect month and year of submission to the Office of the University Registrar.)

Some schools, departments, or programs require different wordings such as those which follow. If in doubt concerning correct wording, contact the Office of the University Registrar (see page 2).

Committee or Program (No Department):

A DISSERTATION
SUBMITTED TO THE {COMMITTEE ON}
{PROGRAM IN} _____
AND THE COMMITTEE ON GRADUATE STUDIES
OF STANFORD UNIVERSITY
IN PARTIAL FULFILLMENT OF THE REQUIREMENTS
FOR THE DEGREE OF
DOCTOR OF PHILOSOPHY

School of Education:

A DISSERTATION
SUBMITTED TO
THE GRADUATE SCHOOL OF EDUCATION
AND THE COMMITTEE ON GRADUATE STUDIES
OF STANFORD UNIVERSITY
IN PARTIAL FULFILLMENT OF THE REQUIREMENTS
FOR THE DEGREE OF
DOCTOR OF PHILOSOPHY

Graduate Program in Humanities:

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AND THE COMMITTEE ON GRADUATE STUDIES
OF STANFORD UNIVERSITY
IN PARTIAL FULFILLMENT OF THE REQUIREMENTS
FOR THE DEGREE OF
DOCTOR OF PHILOSOPHY
IN
_____ AND HUMANITIES

Dual-Language Department:

A DISSERTATION
SUBMITTED TO THE DEPARTMENT OF
{ASIAN LANGUAGES}
{FRENCH AND ITALIAN}
{SPANISH AND PORTUGUESE}
AND THE COMMITTEE ON GRADUATE STUDIES
OF STANFORD UNIVERSITY
IN PARTIAL FULFILLMENT OF THE REQUIREMENTS
FOR THE DEGREE OF
DOCTOR OF PHILOSOPHY
IN
{CHINESE} {JAPANESE}
{FRENCH} {ITALIAN}
{SPANISH}

SAMPLE SIGNATURE PAGE FOR Ph.D. DISSERTATION

Each member of the Dissertation Reading Committee must personally sign four copies of the signature page. The “Approved for the University Committee on Graduate Studies” signature is stamped on each page after submission of the dissertations to the Office of the University Registrar. Your signature page should be formatted exactly as the sample below; note that the names below are for illustration purposes only.

I certify that I have read this dissertation and that, in my opinion, it is fully adequate in scope and quality as a dissertation for the degree of Doctor of Philosophy.

(Harry Smith) Principal Adviser

I certify that I have read this dissertation and that, in my opinion, it is fully adequate in scope and quality as a dissertation for the degree of Doctor of Philosophy.

(Patricia Hernandez)

I certify that I have read this dissertation and that, in my opinion, it is fully adequate in scope and quality as a dissertation for the degree of Doctor of Philosophy.

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The abstract must be in the following format:

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COMPUTATIONAL PROTOTYPING IN
ELECTRICAL ENGINEERING
(Upper-Case Letters)

Jane Lathrop Stanford, Ph.D.
Stanford University, 2014 (year of conferral)

Reading Committee Member: (name)

Text here:

The text must be typed in 1.5 or double spacing, single-sided, and with one-inch margins. It may exceed one page and there is no word limit.

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Stanford Academic Calendar 2014-15

An online version of this calendar is available at the University Registrar's web site: <http://studentaffairs.stanford.edu/registrar/academic-calendar>

AUTUMN QUARTER

AUGUST

- 1 (Fri) Axxess opens for course enrollment.
- 25 (Mon) 1st-year M.D. instruction begins.
- 28 (Thu) 2nd-year M.D. instruction begins.

SEPTEMBER

- 2 (Tue)..... Law School instruction begins for 1st-year J.D. students.
- 12 (Fri, 5:00 p.m.) At-status enrollment deadline in order to receive stipend or financial aid refund by first day of term.
- 15 (Mon) MBA first-year instruction begins.
- 16 (Tue)..... New undergraduates arrive; Convocation.
- 18 (Thu) Undergraduate housing opens for returning students.
- 22 (Mon) First day of quarter; instruction begins.
- 22 (Mon, 5:00 p.m.)..... Preliminary Study List deadline. Students must be "at status"; i.e., students must have a study list with sufficient units to meet requirements for their status, whether full-time, 8-9-10 units (graduate students only), or approved Special Registration Status.
- 22 (Mon, 5:00 p.m.)..... Deadline to submit Leave of Absence for full refund.
- 22 (Mon) Law School instruction begins for 2nd- & 3rd-year J.D. & advanced degree students.
- 25 (Thu) Conferral of degrees, Summer Quarter.
- 26 (Fri) GSB course add/drop deadline (GSB courses only).

OCTOBER

- 10 (Fri, 5:00 p.m.) Final Study List deadline (except GSB). Last day to add or drop a class; last day to adjust units on a variable-unit course. Last day for tuition reassessment for dropped courses or units. Students may withdraw from a course until the Course Withdrawal deadline and a 'W' notation will appear on the transcript.

NOVEMBER

- 5 (Wed, 5:00 p.m.)..... Term withdrawal deadline; last day to submit Leave of Absence to withdraw from the University with a partial refund.
- 14 (Fri, 5:00 p.m.) Change of grading basis deadline, except GSB.
- 14 (Fri, 5:00 p.m.) Course withdrawal deadline, except GSB, Law, and M.D.
- 14 (Fri, 5:00 p.m.) Application deadline for Autumn Quarter degree conferral.
- 21 (Fri) Last day of Law classes
- 24-28 (Mon-Fri) Thanksgiving Recess (no classes).

DECEMBER

- 1-7 (Mon-Sun) End-Quarter Period.
- 5 (Fri) Last day of classes (unless class meets on Sat.)
- 5 (Fri) Last opportunity to arrange Incomplete in a course, at last class.
- 5 (Fri, noon)..... University thesis, D.M.A. final project, or Ph.D. dissertation, last day to submit.
- 5 (Fri, 5:00 p.m.) Late application deadline for Autumn Quarter degree conferral (\$50 fee).
- 5-12 (Fri-Fri)..... Law School examinations.
- 8-12 (Mon-Fri) End-Quarter examinations.
- 13 (Sat, noon)..... Undergraduate housing closes for Winter Break
- 16 (Tue, 11:59 p.m.)..... Grades due.

JANUARY

- 8 (Thu) Conferral of degrees, Autumn Quarter.

WINTER QUARTER

OCTOBER

- 26 (Sun) Axxess opens for course enrollment.

DECEMBER

- 26 (Fri) At-status enrollment deadline in order to receive stipend or financial aid refund by first day of term.

JANUARY

- 3 (Sat, 8:00 a.m.)..... Undergraduate housing opens for Winter Quarter
- 5 (Mon) First day of quarter; instruction begins for all students.
- 5 (Mon, 5:00 p.m.)..... Preliminary Study List deadline. Students must be "at status"; i.e., students must have a study list with sufficient units to meet requirements for their status, whether full-time, 8-9-10 units (graduate students only), or approved Special Registration Status.
- 5 (Mon, 5:00 p.m.)..... Deadline to submit Leave of Absence for full refund.
- 9 (Fri) GSB course add/drop deadline (GSB courses only).
- 19 (Mon) Martin Luther King, Jr., Day (holiday, no classes).
- 23 (Fri, 5:00 p.m.) Final Study List deadline (except GSB). Last day to add or drop a class; last day to adjust units on a variable-unit course. Last day for tuition reassessment for dropped courses or units. Students may withdraw from a course until the Course Withdrawal deadline and a 'W' notation will appear on the transcript.

FEBRUARY

- 16 (Mon) Presidents' Day (holiday, no classes; Law School does hold classes).
- 19 (Thu, 5:00 p.m.)..... Term withdrawal deadline; last day to submit Leave of Absence to withdraw from the University with a partial refund.
- 27 (Fri, 5:00 p.m.) Change of grading basis deadline, except GSB.
- 27 (Fri, 5:00 p.m.) Course withdrawal deadline, except GSB, Law, and M.D.
- 27 (Fri, 5:00 p.m.) Application deadline for Winter Quarter degree conferral.

MARCH

- 9 (Mon) Last day of Law classes.
- 9-15 (Mon-Sun) End-Quarter Period.
- 13 (Fri) Last day of classes (unless class meets on Sat.)
- 13 (Fri) Last opportunity to arrange Incomplete in a course, at last class.
- 13 (Fri, noon)..... University thesis, D.M.A. final project, Ph.D. dissertation, last day to submit.
- 13 (Fri, 5:00 p.m.) Late application deadline for Winter Quarter degree conferral (\$50 fee).
- 13-20 (Fri-Fri)..... Law School examinations.
- 16-20 (Mon-Fri) End-Quarter examinations.
- 21 (Sat)..... Undergrad housing move-out (if departing Winter Quarter)
- 24 (Tue, 11:59 p.m.)..... Grades due.

APRIL

- 2 (Thu) Conferral of degrees, Winter Quarter.

SPRING QUARTER

FEBRUARY

- 8 (Sun) Axxess opens for course enrollment.

MARCH

- 20 (Fri) At-status enrollment deadline in order to receive stipend or financial aid refund by first day of term.
- 28 (Sat)..... Undergraduate housing move-in date for Spring Quarter
- 30 (Mon) First day of quarter; instruction begins.
- 30 (Mon, 5:00 p.m.)..... Preliminary Study List deadline. Students must be "at status"; i.e., students must have a study list with sufficient units to meet requirements for their status, whether full-time, 8-9-10 units (graduate students only), or approved Special Registration Status.
- 30 (Mon, 5:00 p.m.)..... Deadline to submit Leave of Absence for full refund.

APRIL

- 2 (Thu) GSB instruction begins (MBA and MSx courses only).
- 7 (Tue)..... GSB course add/drop deadline (GSB courses only).
- 10 (Fri, 5:00 p.m.) Application deadline for Spring Quarter degree conferral.
- 17 (Fri, 5:00 p.m.) Final Study List deadline. (except GSB) Last day to add or drop a class; last day to adjust units on a variable-unit course. Last day for tuition reassessment for dropped courses or units. Students may withdraw from a course until the Course Withdrawal deadline and a 'W' notation will appear on the transcript.

MAY

- 12 (Tue, 5:00 p.m.) Term withdrawal deadline; last day to submit Leave of Absence to withdraw from the University with a partial refund.
- 22 (Fri, 5:00 p.m.)..... Change of grading basis deadline, except GSB.
- 22 (Fri, 5:00 p.m.)..... Course withdrawal deadline, except GSB, Law, and M.D.
- 25 (Mon) Memorial Day (holiday, no classes).
- 29 (Fri) Last day of Law classes
- 29-June 4 (Fri-Thu) End-Quarter Period

JUNE

- 1-5 (Mon-Fri) Law School examinations.
- 3 (Wed) Last day of classes.
- 3 (Wed) Last opportunity to arrange Incomplete in a course, at last class.
- 3 (Wed, noon)..... University thesis, D.M.A. final project, or Ph.D. dissertation, last day to submit.
- 3 (Wed, 5:00 p.m.) Late application deadline for Spring Quarter degree conferral (\$50 fee).
- 4 (Thu) Day before finals, no classes.
- 5-10 (Fri-Wed)..... End-Quarter examinations.
- 10 (Wed, noon)..... Grades for GSB graduating students due.
- 11 (Thu, noon)..... Grades for graduating students due.
- 12 (Fri)..... Undergraduate housing move-out date (for all students not involved in Commencement)
- 13 (Sat)..... Senior Class Day.
- 13 (Sat)..... Baccalaureate Saturday.
- 13 (Sat)..... Law School Diploma Ceremony
- 14 (Sun) Commencement. Conferral of degrees, Spring Quarter.
- 15 (Mon) Undergraduate Housing move-out date (for graduates and others involved in Commencement with permission)
- 16 (Tue, 11:59 p.m.) Grades for non-graduating students due.

SUMMER QUARTER

APRIL

- 12 (Sun) Axxess opens for course enrollment.

JUNE

- 12 (Fri) At-status enrollment deadline in order to receive stipend or financial aid refund by first day of term.
- 22 (Mon) First day of quarter; instruction begins.
- 22 (Mon, 5:00 p.m.)..... Preliminary Study List deadline.
- 22 (Mon) Deadline to submit Leave of Absence for full refund.

JULY

- 3 (Fri) Independence Day celebrated (holiday, no classes).
- 6 (Mon, 5:00 p.m.)..... Final Study List deadline. Last day to add or drop a class; last day to adjust units on a variable-unit course. Last day for tuition reassessment for dropped courses or units. Students may withdraw from a course until the Course Withdrawal deadline and a 'W' notation will appear on the transcript.
- 24 (Fri, 5:00 p.m.) Term withdrawal deadline; last day to submit Leave of Absence to withdraw from the University with a partial refund.
- 31 (Fri, 5:00 p.m.) Change of grading basis deadline.
- 31 (Fri, 5:00 p.m.) Course withdrawal deadline.
- 31 (Fri, 5:00 p.m.) Application deadline for Summer Quarter degree conferral.

AUGUST

- 8-13 (Sat-Thu)..... End-Quarter Period.
- 13 (Thu) Last day of classes.
- 13 (Thu) Last opportunity to arrange Incomplete in a course, at last class.
- 14-15 (Fri-Sat)..... End-Quarter examinations.
- 18 (Tue, 11:59 p.m.)..... Grades due.
- 28 (Fri, noon)..... University thesis, D.M.A. final project, or Ph.D. dissertation, last day to submit.
- 28 (Fri, 5:00 p.m.) Late application deadline for Summer Quarter degree conferral (\$50 fee).

SEPTEMBER

- 24 (Thu) Conferral of degrees, Summer Quarter

Issued April 1, 2014

Academic Calendar 2015-16
First day of classes and last day of finals
 Autumn 2015-16: September 21 and December 11
 Winter 2015-16: January 4 and March 18
 Spring 2015-16: March 28 and June 8 (Commencement June 12)
 Summer 2015-16: June 20 and August 13